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First record of genus *Gnaphosa* Latreille, 1804 (Araneae: Gnaphosidae) in Iraq

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Abstract

This is the first record of genus *Gnaphosa* Latreille, 1804, in Iraq. Two males of *G. dolosa* Herman, 1879, were collected from Al-Qadisiyah province, southern Iraq. So far, 45 genera of Araneae have been recorded in Iraq. *Gnaphosa* is the 46th genus.

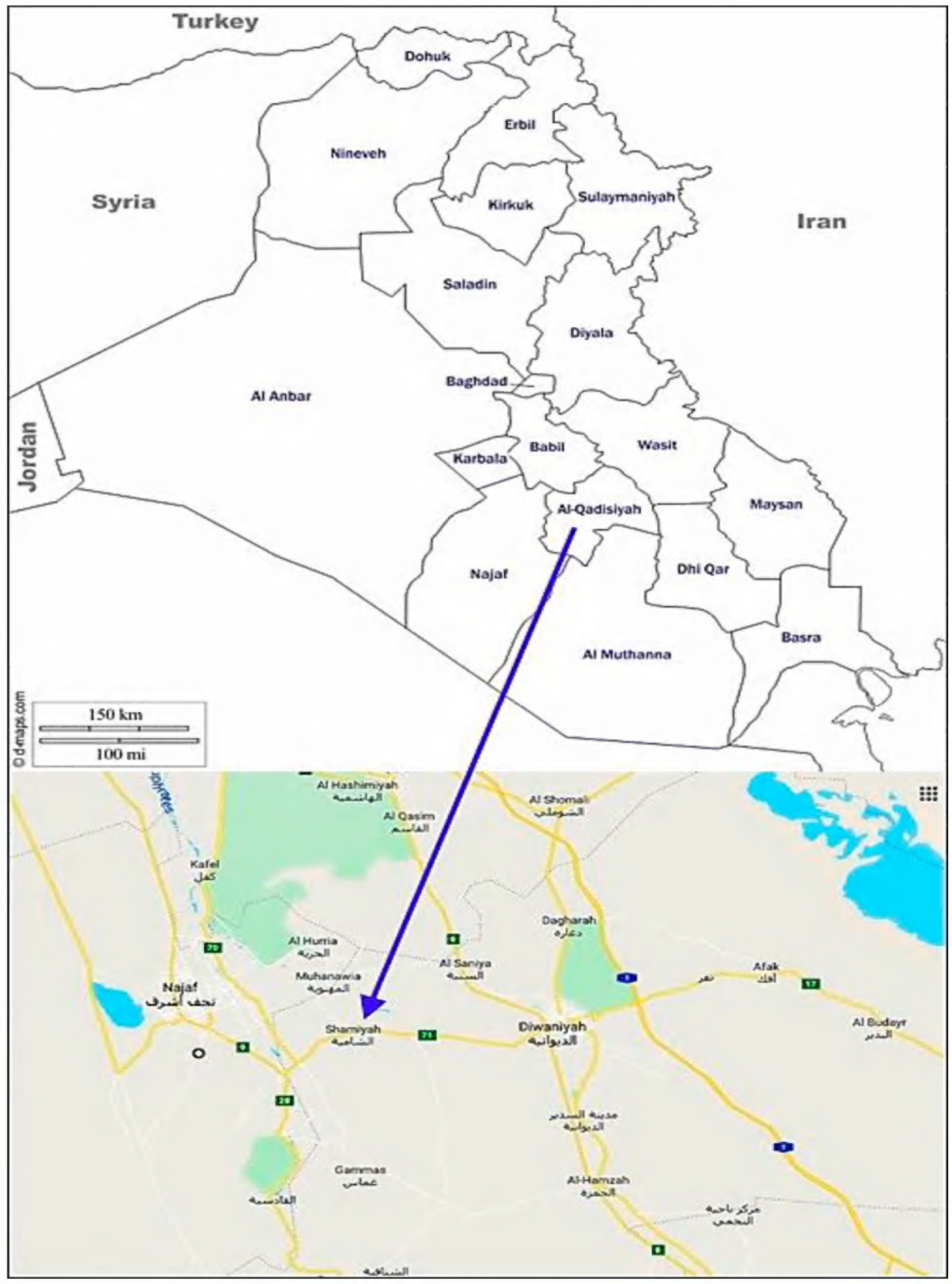
Keywords: Araneae, Gnaphosidae, *Gnaphosa*, first record, Iraq.

Introduction

Genus *Gnaphosa* Latreille, 1804 is one of the largest genera in family Gnaphosidae, represented by 148 described species worldwide (World Spider Catalog, 2019). Members of genus *Gnaphosa* may be distinguished from other gnaphosids by the presence of a serrated keel on the cheliceral retromargin and by the rounded endites (Platnick & Shadab, 1975). The male *Gnaphosa dolosa* can be distinguished from other *Gnaphosa* species by the short, narrow embolus with a strongly curved apical portion and prolaterally directed with a tubercle near its base (Ovtsharenko *et al.*, 1992). This species is recorded in three neighbouring countries to Iraq, *i.e.* Syria, Turkey, and Iran (World Spider Catalog, 2019).

The Iraqi spider fauna are still poorly studied, a few papers have been published on this group of animals, four of which were recently published by Fomichev *et al.* (2018), Al-Kazali (2018), Al-Khazali & Najim (2018), and Al-Khazali & Jäger (2019) adding 23 species, of 16 genera belonging to eight families. Family Gnaphosidae in Iraq is represented by only two genera: *Nomisia* and *Pterotricha* (Fomichev *et al.*, 2018). In

the current paper, we add genus *Gnaphosa* and *G. dolosa* Herman, 1879 as a new record to the Iraqi spider fauna.



Map 1. Map of Iraq and neighbouring countries showing the collecting locality of *Gnaphosa dolosa* in Al-Shamiyah district, Al-Qadisiyah province, southern Iraq.

The specimens were collected from one of the orchards in Al-Shamiyah district in Al-Qadisiyah province, southern Iraq (Map 1). They were preserved in 70% ethanol and examined using NBT-3A stereomicroscope. Species identification was confirmed by comparing with figures of Ovtsharenko *et al.* (1992), Levy (1995), and Gaymard & Lecigne (2018). The measurements of the legs are given as total length (femur, patella+tibia, metatarsus, tarsus). All measurements are in millimetres.

Taxonomy

Family **Gnaphosidae** Pocock, 1898

Genus ***Gnaphosa*** Latreille, 1804

Gnaphosa dolosa Herman, 1879 (Figs. 1-2).

Gnaphosa dolosa Herman, 1879: 191, 362, pl. 7, f. 167 (D♂♀).

Gnaphosa dolosa Ovtsharenko, Platnick & Song, 1992: 9, f. 7-8, 19-22 (♂♀).

Gnaphosa barroisi Levy, 1995: 977, f. 139-142 (♂♀).
Gnaphosa dolosa Gaymard & Lecigne, 2018: 12, f. 8G-J (♂♀).

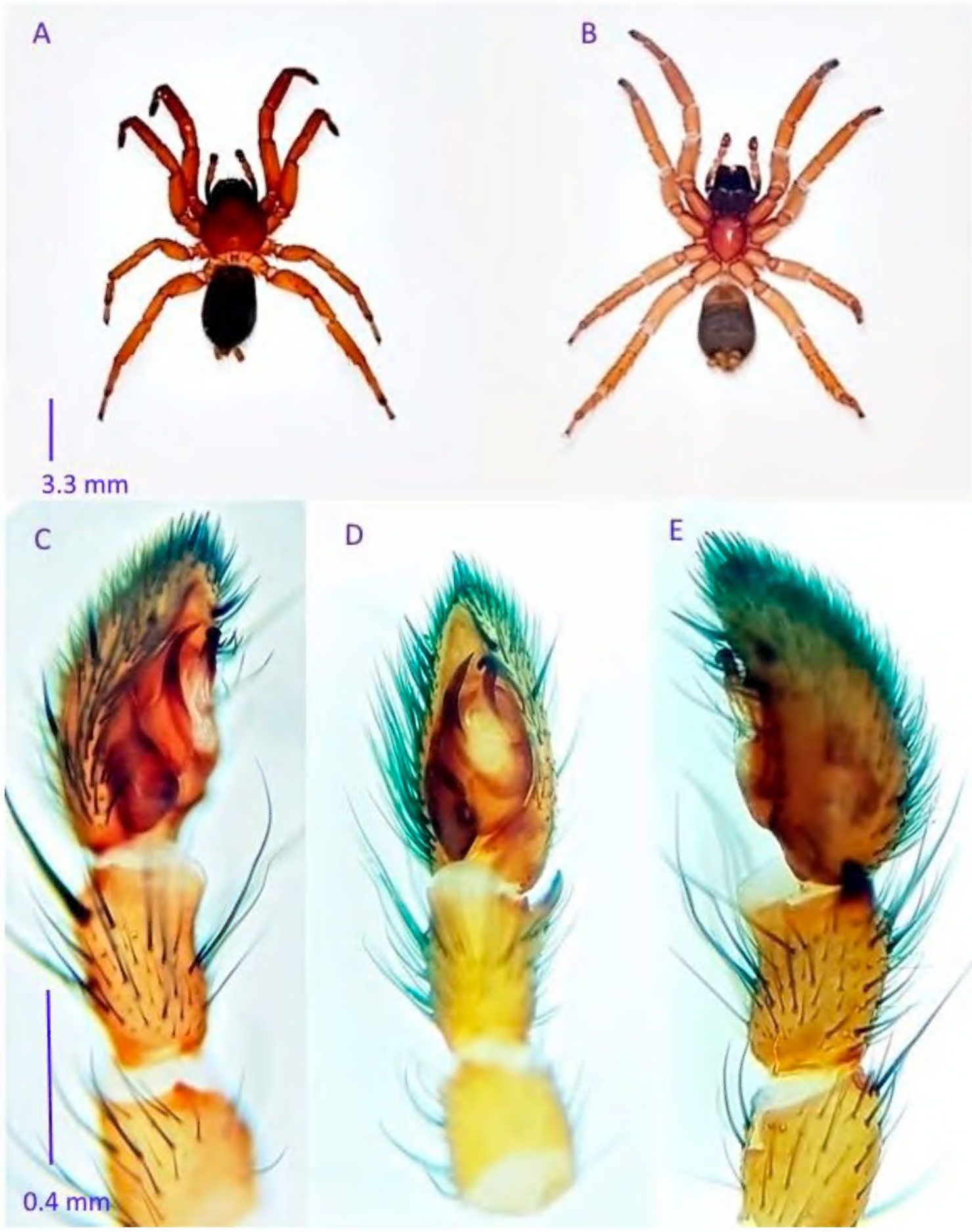


Fig. 1. *Gnaphosa dolosa* Herman, 1879 ♂. A-B. Habitus. A. dorsal view. B. ventral view. C-E. Left palp. C. prolateral view. D. ventral view. E. retrolateral view. (Photos by A. Al-Khazali).

Material examined. 2♂♂, Iraq: Al-Qadisiyah province, Al-Shamiyah district, 31°57'44.11"N, 44°35'58.57"E, 17.1.2019.

Description

Male: Total body length 8.4, carapace length 4.3, carapace width 2.8; abdomen length 4.1, abdomen width 2.6. Legs measurements: I 7.2 (1.9, 3.2, 1.2, 0.9), II 7.5 (2.3, 3.1, 1.3, 0.8), III 7.1 (2.3, 2.4, 1.4, 1.0), IV 8.4 (2.1, 2.8, 2.3, 1.2). Carapace brown pear-shaped, with a clear fovea (Fig. 2A). Eyes relatively small arranged in two rows, posterior row recurved and longer than anterior row, posterior median eyes closer to each other than to

posterior lateral eyes. Sternum the same colour as carapace. Chelicerae, fangs and endites uniformly dark brown (Fig. 2C). Labium longer than wide, same colour as endites. Legs uniformly colour umber. Abdomen oval-shaped, gray to brown without distinctive pattern. Palp with one tibial apophysis, embolus narrow, short, and strongly curved at tip and prolaterally directed, with a tubercle near its medial portion (Figs. 1C-E, 2D).

Global distribution: *G. dolosa* has been recorded from Southern to Eastern Europe, Turkey, Syria, Iran, Caucasus, Russia (Europe) to Central Asia (World Spider Catalog, 2019), and recorded for Iraq in current study paper.

Habitat: The specimens were collected from under rocks at orchard in Al-Shamiyah district, Al-Qadisiyah province, southern Iraq.

Comments: Although genus *Gnaphosa* includes 148 described species in the world, it is still poorly represented in the Middle East especially in the current region. There are only 13 *Gnaphosa* species recorded in five countries of the Middle East, *i.e.* Turkey, Iran, Syria, Jordan (?), and Lebanon. Due to the records of *G. dolosa* from four neighbouring countries of Iraq, it was expected to record it in Iraq too.

Fig. 2. *Gnaphosa dolosa* Herman, 1879 ♂. A. Carapace, dorsal view. B. Sternum, ventral view. C. Chelicerae and endites, ventral view. D. Embolus of palp, prolateral view showing tubercle (Arrow). (Photos by A. Al-Khazali).

Acknowledgment

Our gratitude and appreciation are to the Egyptian Prof. Hisham K. El-Hennawy for providing scientific advice.

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Two new records of genus *Eriovixia* Archer, 1951 (Araneae: Araneidae) from the Western Ghats, Wayanad region

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Abstract

Genus *Eriovixia* Archer, 1951 is a small tropical genus that exhibits a wide geographical distribution from Southeast Asia to Africa. *Eriovixia patulisus* (Barrion & Litsinger, 1995) collected from Pookode Lake in Wayanad and *Eriovixia sakiedaorum* Tanikawa, 1999 from the host plants *Coffea arabica* and *Camellia sinensis* of Chooralmala in Wayanad district are recorded for the first time in India. Their diagnostic features and distribution are presented.

Keywords: Araneae, Araneidae, *Eriovixia*, Wayanad, Western Ghats, India.

Introduction

Eriovixia Archer, 1951 is a small tropical genus of araneid spiders, comprising 23 species worldwide among which only six species are distributed in India (World Spider Catalog, 2018.). Han & Zhu (2010) treated *Tukaraneus* Barrion & Litsinger, 1995 as a junior synonym of *Eriovixia* Archer, 1951. In this paper, two species of *Eriovixia*, *Eriovixia patulisus* (Barrion & Litsinger, 1995) and *Eriovixia sakiedaorum* Tanikawa, 1999 are added to the Indian spider fauna.

Material and Methods

The specimens examined for the present study were collected from Pookode Lake and 900 Kandi forest, Kalladi, Wayanad, located at the southern tip of the Deccan Plateau in the Western Ghats. Samples were collected by hand picking method, preserved, and

examined under a stereomicroscope (LEICA EZ4HD). Illustrations were made with the aid of a Camera Lucida. Photographs were taken with a digital camera attached to the Leica DFC 290 stereomicroscope. Specimens are deposited at the Western Ghats Regional Centre, Zoological Survey of India, Calicut, Kerala, India.

Results

Genus ***Eriovixia*** Archer, 1951

Members of the genus have carapace covered with long soft hairs, especially on the cephalic region. Abdomen sub-triangular with a pronounced tail like extension at the rear and with or without a caudal appendage. Epigynum composed of a stout scape with recurved tip. Tibia of male pedipalp with two long setae and median apophysis projected apically.

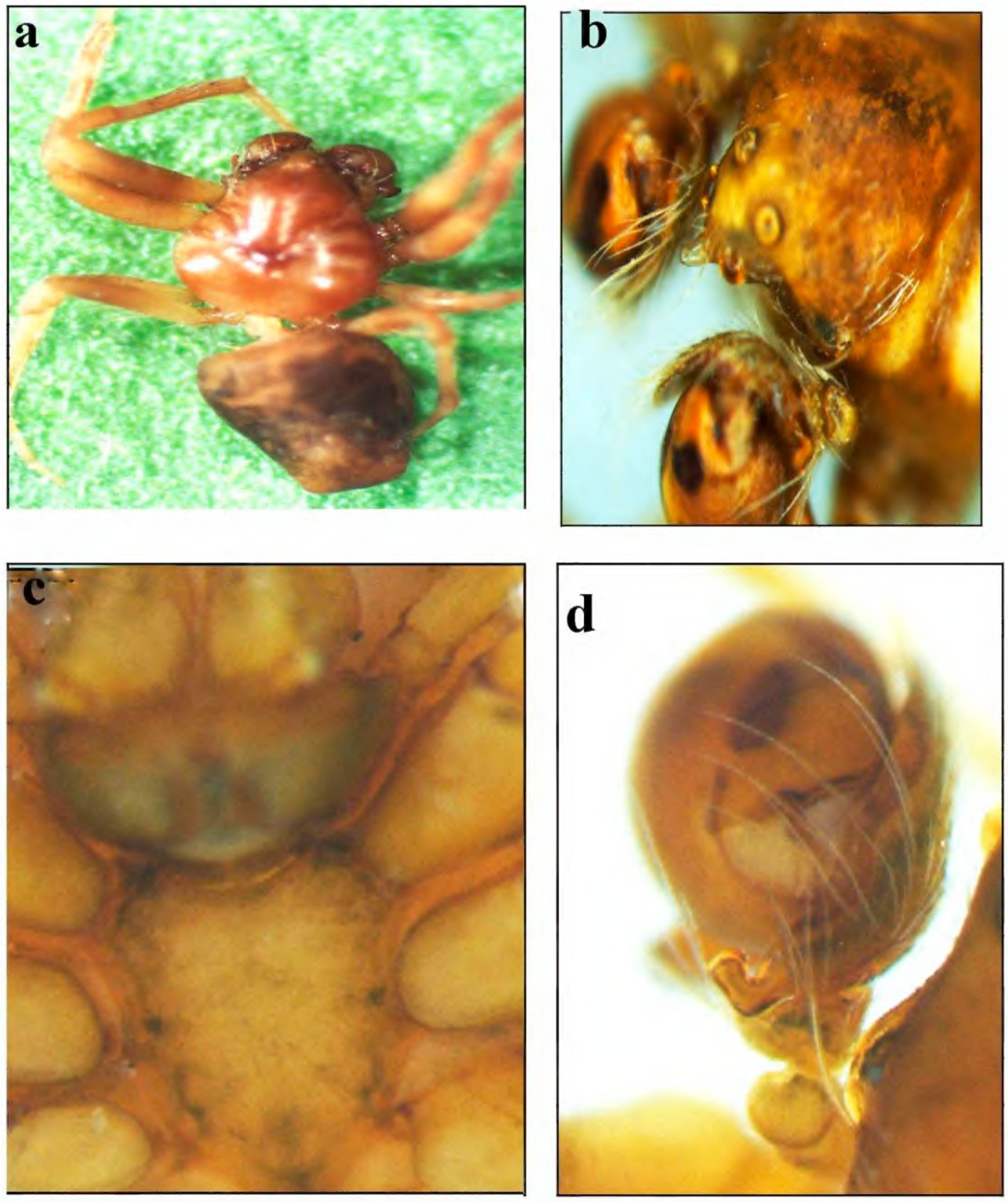

Fig. 1. *Eriovixia patulisus* (Barrion & Litsinger, 1995) ♂. a. Habitus, dorsal view. b. Clypeus snout, dorsal view. c. Sternum, ventral view. d. Palpal organ.

Eriovixia patulisus (Barrion & Litsinger, 1995) (Fig. 1)
Tukaraneus patulisus Barrion & Litsinger, 1995

Diagnosis

Male: Clypeus forms a pointed snout (Fig. 1a,b); length of snout as long as median ocular quadrangle height. Sternum yellow and smooth, longer than wide, pointed posteriorly between coxae IV (Fig. 1c). Tibia of pedipalp with seven or eight long whitish yellow setae left of paracymbium and two or three to the right side, dorsally with at least four trichobothria; median apophysis sub triangular, large with a curved or hooked apical process and a small basal tooth. Cymbium round apically and clothed with whitish yellow hairs (Fig. 1d) (Barrion & Litsinger, 1995).

Material examined: 1♂, Pookode Lake, Wayanad, 22.08.2016.

Distribution: Philippines (Barrion & Litsinger, 1995) and India (Wayanad).

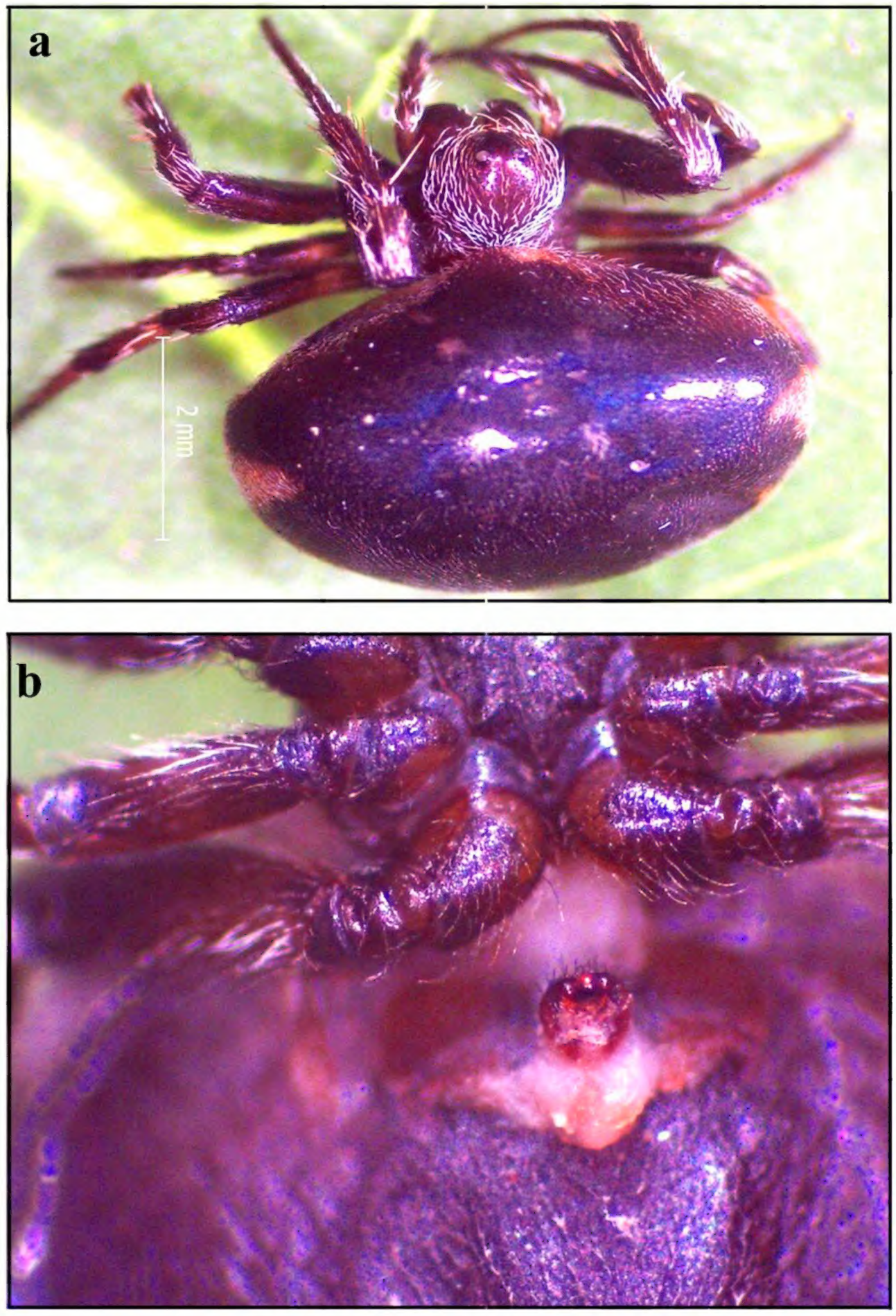

Fig. 2. *Eriovixia sakiedaorum* Tanikawa, 1999 ♀. a. Habitus, dorsal view. b. Epigynum, ventral view.

Eriovixia sakiedaorum Tanikawa, 1999 (Fig. 2)

Diagnosis

Female: Abdomen black dorsally with two white markings laterally, two pairs of large brown sigillae arranged mid-longitudinally (Fig. 2a). Spinnerets brown. Tip of the epigynal scape blunt and hooked (Fig. 2b).

Material examined: 4♀♀, Chooralmala, Wayanad, 12.11.2016 and 02.09.2017.

Distribution: China (Hainan), Taiwan, Japan and India (Wayanad).

Host plants: *Coffea arabica* and *Camellia sinensis*.

Acknowledgments

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New records of Linyphiidae (Araneae) for Turkish araneo-fauna

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Abstract

Dismodicus bifrons (Blackwall, 1841) and *Trichoncus affinis* Kulczyński, 1894 are new records for the spider fauna of Turkey. The characteristic features and photographs of *D. bifrons* and *T. affinis* are presented.

Keywords: Spiders, Linyphiidae, new records, Turkey.

Introduction

Linyphiidae is the second largest family of spiders, including 4591 species (World Spider Catalog, 2019). There are 129 species known in the Turkish fauna (Demir & Seyyar, 2017; Danışman *et al.*, 2019). The new records in this study raise the number of linyphiid species known from Turkey to 131.

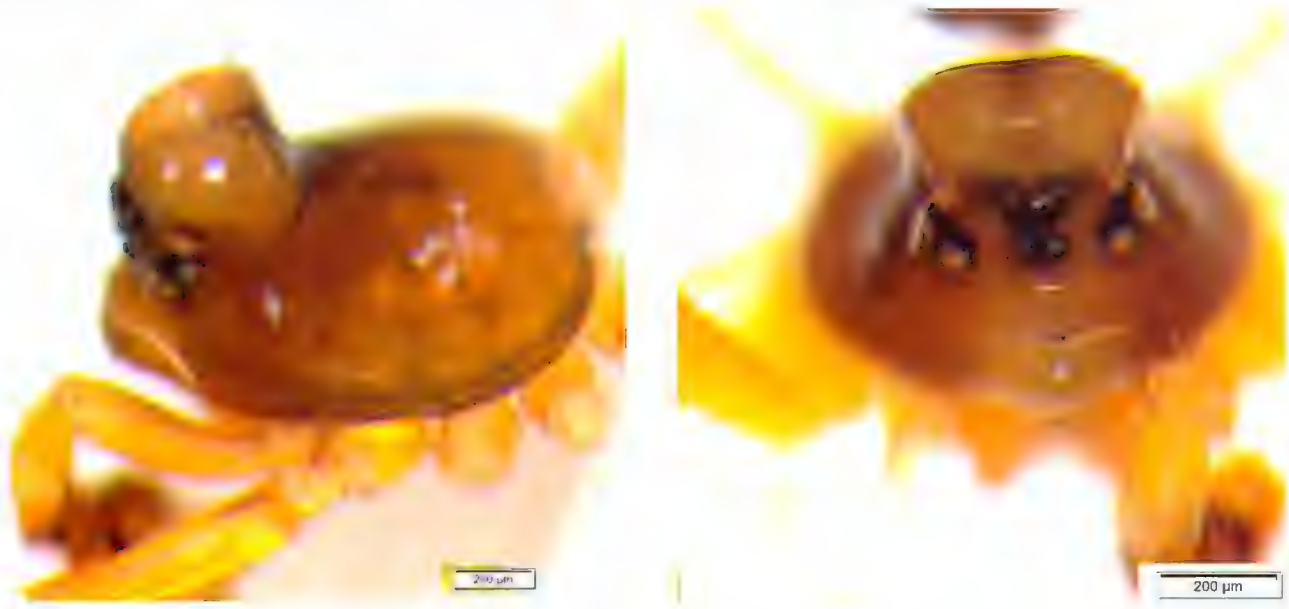
Material and Methods

The material was collected by sweeping net over plants. They were preserved in 70% ethanol. In the identification, the keys of Heimer & Nentwig (1991) and Roberts (1987) were consulted. The identification was made by means of a SZX61 Olympus stereomicroscope. Examined specimens were deposited in the NÖHUAM (Niğde Ömer Halisdemir University Arachnological Museum). The distribution of these species is given according to the World Spider Catalog (2019).

Results

Dismodicus bifrons (Blackwall, 1841)
Material examined: Kırklareli Province, İğneada District, 1♂, 26.06.2017 (T. Danışman).
Description of male: Body length 1.9 mm. Prosoma dark brown (Figs. 1-3). Elevated cephalic region slightly bullous posteriorly (Figs.1-3). Legs yellow (Fig. 1). Opisthosoma dark grey to black (Fig. 1). Pedipalp and tibial apophysis as in Fig. (4).
Distribution: Europe, Russia (Europe to Far East) (World Spider Catalog, 2019), Turkey (new record).
Habitat: The specimen was collected from low vegetation.

Fig. 1. *Dismodicus bifrons* (Blackwall, 1841) ♂. Habitus, dorsal view.



Figs. 2-3. *Dismodicus bifrons* ♂. Prosoma. 2. lateral view. 3. frontal view.

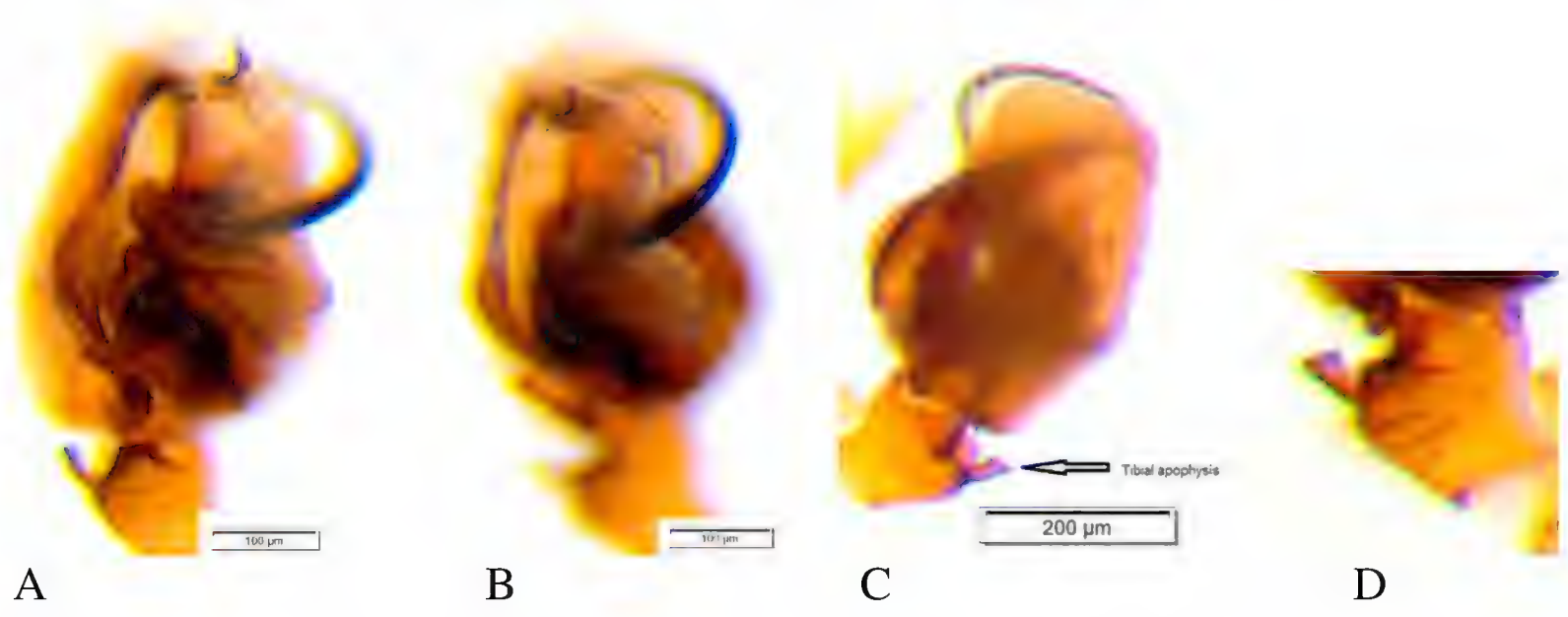


Fig. 4. *Dismodicus bifrons* ♂. Palpal organ. A. retrolateral view. B. ventral view. C. dorsal view. D. tibial apophysis.

Trichoncus affinis Kulczyński, 1894

Material examined: Kırklareli Province, İğneada District, 1♂, 26.06.2017 (T. Danışman).

Description of male: Body length 2.2 mm. Prosoma dark brown, with black-brown margin, median spot and radial stripes (Fig. 5). Legs yellow-brown (Fig. 5). Opisthosoma black (Fig. 5). Pedipalp as in Fig. (6). Cymbium with clearly visible bulge on base. Tibial apophysis long and characteristic.

Distribution: Europe (World Spider Catalog, 2019), Turkey (new record).

Habitat: The specimen was collected from low vegetation.

Fig. 5. *Trichoncus affinis* Kulczyński, 1894 ♂. Habitus, dorsal view.

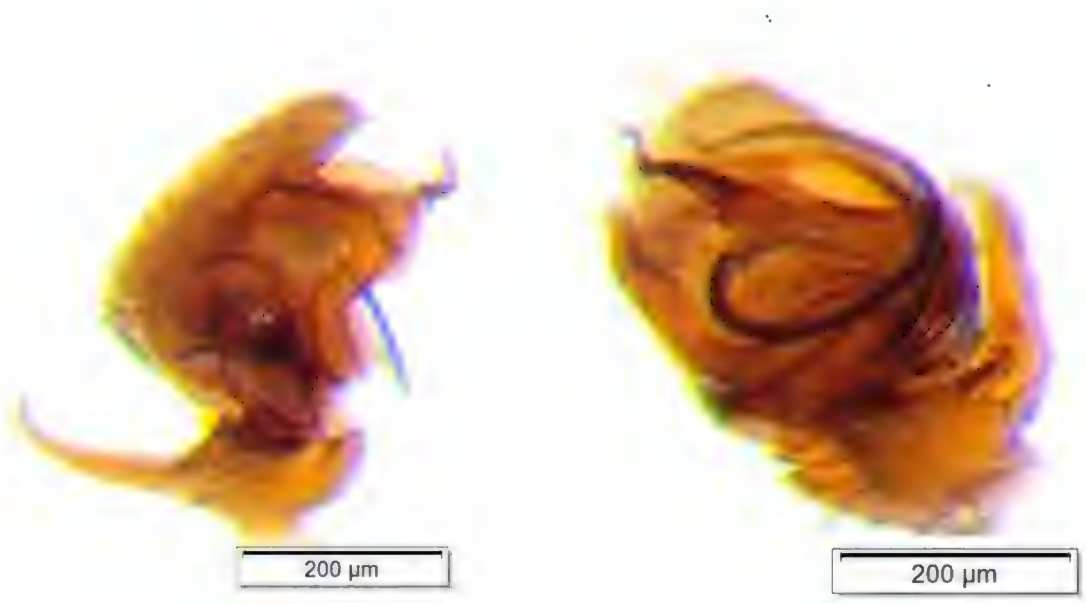


Fig. 6. *Trichoncus affinis* ♂. Palpal organ. A. retrolateral view. B. ventral view.

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A new record of genus *Lathys* Simon, 1884 from Turkey (Araneae: Dictynidae)

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Abstract

Lathys spasskyi Andreeva & Tyschchenko, 1969 is identified as a new record for the Turkish araneofauna. Its morphology is briefly described and illustrated.

Keywords: Araneae, Dictynidae, *Lathys*, fauna, new record, Turkey.

Introduction

Dictynidae is currently represented by 469 species belonging to 52 genera in the world (World Spider Catalog, 2019). There are 21 species in 11 dictynid genera listed for Turkey. So far, four species belonging to genus *Lathys* Simon, 1884 have been reported from Turkey (Topçu *et al*., 2005; Demir & Seyyar, 2017). In this study, *Lathys spasskyi* Andreeva & Tyschchenko, 1969 is recorded for the first time from Turkey. Therefore, the known species of genus *Lathys* Simon, 1884 is raised to five in Turkey.

Material and Methods

One specimen was collected from the Mediterranean Region (Antalya) by means of hand aspirator and preserved in 70% ethanol. SZX16 Olympus binocular stereomicroscope was used during identification which depended on Marusik *et al.* (2006) and Marusik *et al.* (2015). All measurements are in millimetres. The examined specimen was deposited in the Arachnology Museum of Ömer Halisdemir University (NOHUAM). World distribution of *L. spasskyi* follows the World Spider Catalog (2019).

Results

In this study, *Lathys spasskyi* Andreeva & Tyschchenko, 1969 is recorded for the first time from Turkey. Therefore, the known species of genus *Lathys* Simon, 1884 is raised to five in Turkey. The total number of this family recorded from Turkey is now 22 species.

Lathys spasskyi Andreeva & Tyschchenko 1969
Material examined: Antalya Province, around Akseki-İbradı (37°07'50"N, 31°59'33"E), 18.05.2007, 1♀.
Description: Body length 3 mm (Fig. 1A). Prosoma with chelicerae 1.2 mm, light brown with black lines behind eyes and eye field. Opisthosoma 1.8 mm, greyish with black spots. Legs pale and brownish. Epigyne with two openings, one vertical coil around each receptaculum and two horizontal coils above each opening (Fig. 1B-D).
World distribution: Azerbaijan, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan (World Spider Catalog, 2019).

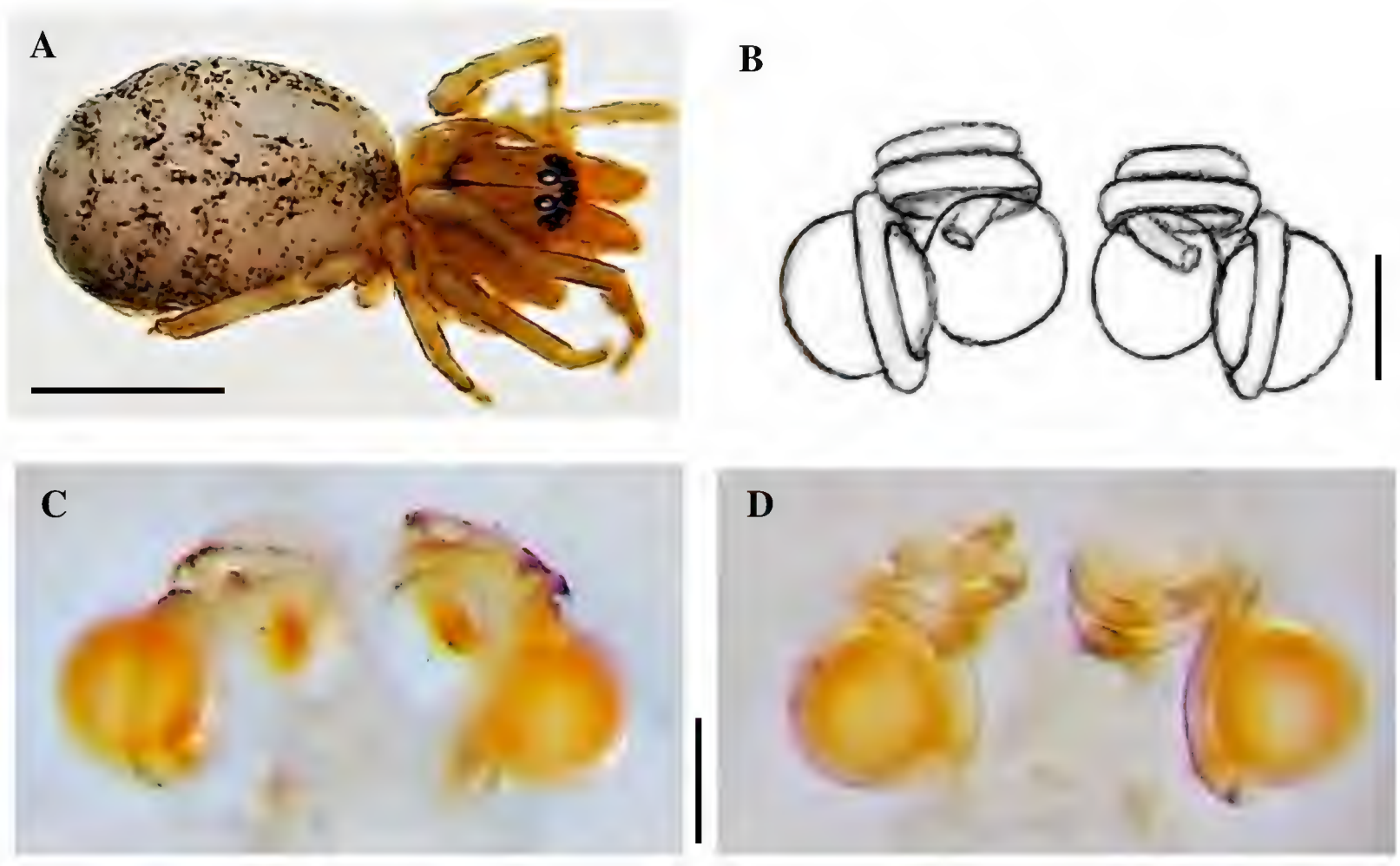

Fig. 1. *Lathys spasskyi* Andreeva & Tyschchenko, 1969, ♀. A. Habitus, dorsal view. B-C. Epigyne, ventral view. D. Epigyne, dorsal view. Scale bars: A. 1 mm. B-D. 0.1 mm.

Acknowledgment

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Tapinopa longidens (Wider, 1834), a new spider record belonging to the family Linyphiidae from Turkey

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Abstract

This short paper reports the linyphiid species *Tapinopa longidens* (Wider, 1834) as new to the Turkish araneo-fauna. Its characteristic features and photographs are presented. With this data, the number of species belonging to family Linyphiidae family in Turkey has increased.

Keywords: Spiders, Linyphiidae, *Tapinopa*, new record, Turkey.

Introduction

Linyphiidae Blackwall, 1859 is one of the largest families of spiders with 4591 described species. In this family, genus *Tapinopa* Westring, 1851 is represented by 8 species (World Spider Catalog, 2019). Until today, this genus has been recorded in Palaearctic, Nearctic, and Oriental regions. Three of these eight species are located in Europe: *Tapinopa disjugata* Simon, 1884, *T. gerede* Saaristo, 1997 and *T. longidens* (Wider, 1834). *T. gerede* is endemic to Turkey. Its description was based on a female specimen from Bolu-Gerede. In this study, *Tapinopa longidens* (Wider, 1834) is recorded from Turkey for the first time. This new record increases the known Turkish linyphiid fauna to more than 130 species (Demir & Seyyar, 2017; Danışman *et al.*, 2019).

Material and Methods

Two male specimens were examined from East Anatolia Region of Turkey. Specimens were collected by means of a hand aspirator from under stones. Well-known

identification keys were used for identification (Heimer & Nentwig, 1991; Roberts, 1995). Identification was made using a Leica S8APO stereomicroscope. Pictures were taken using a Leica S8APO microscope by means of a Leica DC 160 camera. Images were montaged using "CombineZM" image stacking software and "Photoshop CS5" image editing software. All measurements are given in millimetres. The studied samples were preserved in 70% ethanol and deposited in the collection of the Arachnological Museum of Kırıkkale University (KUAM).

Results

Genus ***Tapinopa*** Westring, 1851

Tapinopa longidens (Wider, 1834)
Material examined: 2♂♂, Van Province, Edremit District (38°25'10"N, 43°15'38"E), 25.07.2009.
Description of male: Total length 4.1. Prosoma 2.2 long, 1.7 wide. Abdomen 1.9 long, 1.4 wide. Prosoma is light brown with black patterns on lateral sides. There are no hairs on the rest of the prosoma while there is a few thick black hairs in the ocular area (Fig. 1A). Chelicerae are brown and very long cheliceral teeth are present (Fig. 2). Sternum is greyish brown. Labium and maxillae are brown (Fig. 1B). Both dorsal and ventral sides of the abdomen are grey (Fig. 1A-B). Cymbium with distal projection, its tip is S-shaped bent and its margin with notches.
Distribution: Europe, Caucasus, China, Japan (World Spider Catalog, 2019).

Fig. 1. *Tapinopa longidens* ♂. Habitus. A. dorsal view. B. ventral view. (Scale: 1.0).

Fig. 2. *Tapinopa longidens* ♂. Ocular area and chelicerae, frontal view. (Scale: 0.5).

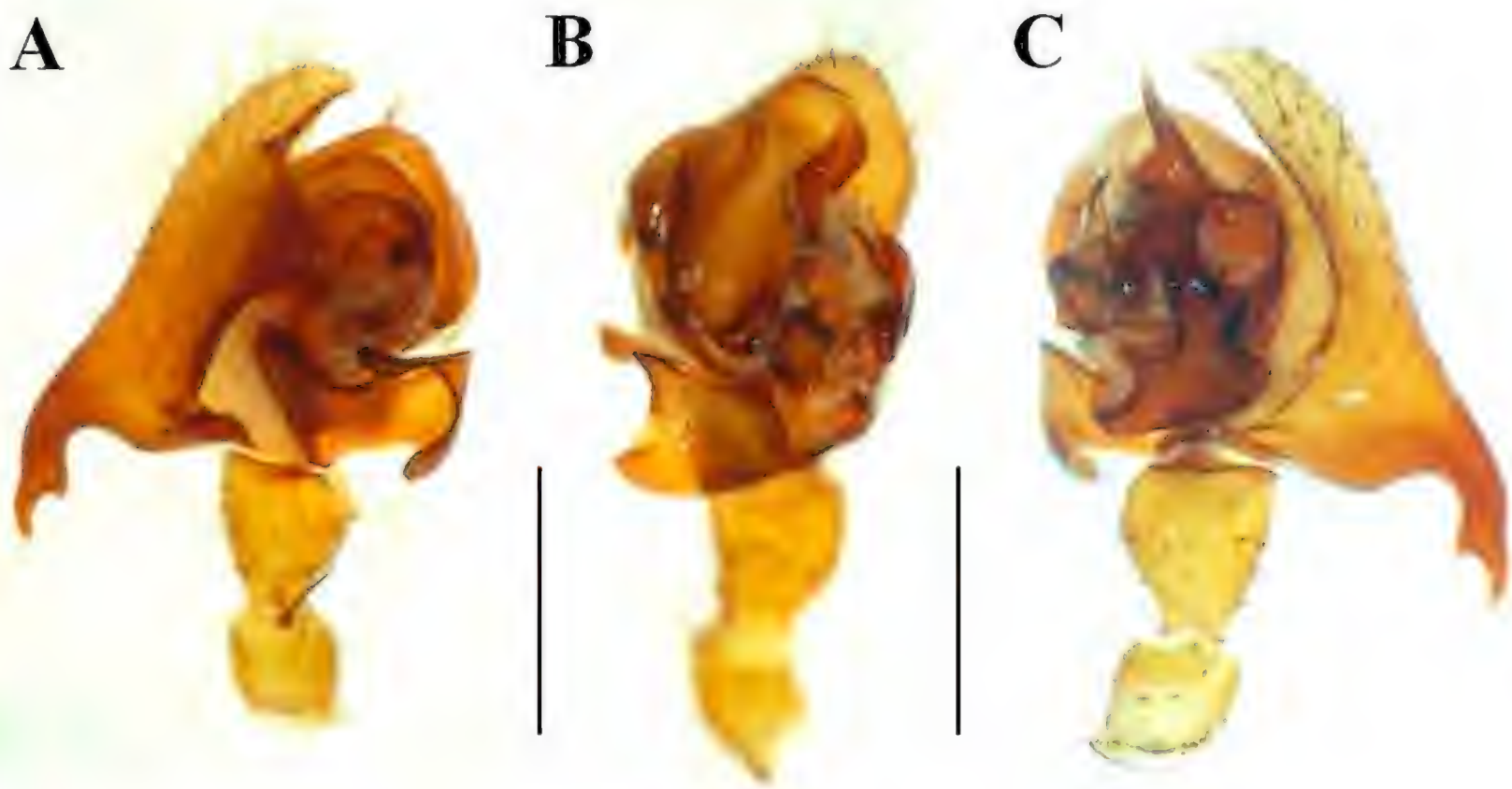

Fig. 3. *Tapinopa longidens* ♂. Pedipalp. A. prolateral view. B. ventral view. C. retrolateral view. (Scale: 0.5).

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A new mygalomorph spider species from Turkey (Araneae: Mygalomorphae: Macrothelidae)

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Abstract

A new spider species of genus *Macrothele* Ausserer, 1871 is described, based on a single female specimen collected from Taurus Mountains, Turkey. The new species, *Macrothele drolshageni* sp. n. differs from representatives of the genus from Europe by both somatic traits and the shape of vulvae. The new species is described in detail and habitus and vulvae pictures are presented.

Keywords: Araneae, Macrothelidae, biodiversity, primitive spiders, Anatolia, Turkey.

Introduction

Macrothele Ausserer, 1871 is a spider genus represented by 31 species with Palaearctic, Oriental, and west-Central African distribution (World Spider Catalog, 2019). There were two species known from the west Palaearctic region until this paper.

We have encountered representatives of this genus during our field studies aiming to document the spider fauna of Turkey. The first specimen was a sub-adult female collected from Antalya province, the Taurus mountain range, Turkey in June 2010 (Kunt

et al., 2012). Continued sampling efforts later on led us to find an adult female, which was collected from the soil at the same locality approximately one year later.

It was easy to tell that the female was not *Macrothele calpeiana* (Walckenaer, 1805) by comparing the shape of vulvae. The second species from the Mediterranean was a Cretan one, *M. cretica* Kulczyński, 1903, but neither the female of *M. cretica* had known before, nor we had males in our possession to make comparisons. Therefore, the only way for a reasonable solution for the identification problem appeared to us as obtaining males from the Antalya population. Since 2011, we have been sparing substantial amount of effort in hope of collecting additional specimens by using alternative approaches such as pitfall trapping and continuous sampling at different seasons; but despite of these efforts, we could not find any male, nor any further female.

There have been two advancements undergone recently related to our specimen during its long waiting period in the museum. Firstly, genus *Macrothele* was transferred from Hexathelidae to family Macrothelidae by Hedin *et al.* (2018). Secondly, Chatzaki & Komnenov (2019) published a re-description for *M. cretica* and described the unknown female based on new specimens collected from the island of Crete. Especially this second paper was of the utmost importance to us, as we noticed that vulvae characteristics reported for *M. cretica* by these authors were not compatible with our specimen.

Therefore, the aim of this study is to describe a new species of *Macrothele* based on the single female collected from Taurus Mountains in Turkey.

Material and Methods

A specimen was collected from Turkey by hand collection, preserved in 70% ethanol and deposited in the Zoology Museum of Eskişehir Technical University. Digital images of the copulatory organs and habitus characteristics were obtained using a Leica DFC295 digital camera attached to a Leica S8AP0 stereomicroscope. Five to 15 photographs were taken in different focal planes and combined using "CombineZP" image stacking software. All measurements are given in millimetres. Terminology for measurements and copulatory organs was adapted mostly from Snazel & Allison (1989) and Decae & Huber (2017).

Abbreviations used: ALE = anterior lateral eye, AME = anterior median eye, AR = anterior eye row, BL = total body length, Ca = caput length, CL = carapace length, CW = carapace width, d = dorsal, EL = length of eye group, Ext = external distance between receptacles, Int = internal distance between receptacles, LL = labium length, LW = labium width, ML = maxillae length, MW = maxillae width, p = prolateral, pd = prodorsal, PLE = posterior lateral eye, PLS = posterior lateral spinnerets, PME = posterior median eye, PMS = posterior median spinnerets, PR = posterior eye row, pv = proventral, r = retrolateral, rd = retrodorsal, rv = retroventral, SL = sternum length, SW = sternum width; v = ventral.

Taxonomy

Family **Macrothelidae** Simon, 1892

Genus ***Macrothele*** Ausserer, 1871

Macrothele drolshageni sp. n. (Figs. 1-2)

Material examined: Holotype 1♀, Turkey, Antalya Province, Alanya District, Taşatan Plateau (36°40'14.08"N, 32°10'16.18"E), 14 July 2011, 1170 m a.s.l., leg. R.S. Özkütük.

Derivatio nominis: The new species was named in honour of the Mygalomorphae spider specialist Bastian Drolshagen, who gave us valuable insights about the identity of the first specimen collected.

Fig. 1. *Macrothele drolshageni* sp. n., ♀ holotype. A. Prosoma, dorsal view. B. Eyes, dorsal view. C. Maxillae, labium, sternum, ventral view. D. Spinnerets, ventral view.

Diagnosis: *Macrothele drolshageni* sp. n. can be identified from the other two species of the genus known from west Palaearctic by the presence or absence of certain somatic characters and differences on the traits of vulva, which could be expressed as follows:
1. Lyra is lacking in *M. drolshageni* sp. n., which is present in *M. calpeiana*.
2. Maxillar cuspule count is less in *M. drolshageni* sp. n. than both *M. calpeiana* and *M. cretica*.
3. Tarsal claws are pectinate inferiorly with varying number of teeth between legs on the female holotype of *M. drolshageni* sp. n., whereas pectinisation was not reported for females of *M. calpeiana* or *M. cretica*.

4. Spermathecae cylindrical and sharply bent posteriorly in *M. drolshageni* sp. n., whereas long and coil shaped in *M. calpeiana* and simple and sinuous in *M. cretica*.

Description of the female holotype. Measurements: BL 14.50, CL 4.50, CW 3.20, Ca 2.50, AR 0.85, PR 0.80, EL 0.45, ALE 0.28, PLE 0.10, ALE-AME 0.03, ALE-PLE 0.025, PLE-PME touching, AME-AME 0.10, PME-PME 0.23, SL 2.00, SW 1.72, LL 0.88, LW 0.60, ML 1.44, MW 0.88, Int 0.32, Ext 0.48.

Carapace brown. AMEs procurved. PLEs recurved. AMEs on a black tubercle. Carapace with tiny, black, sparse hair. Fovea distinct, as a horizontally linear pit. Chelicerae dark brown, without rastellum; with tiny, dense hair anteriorly. Cheliceral hair longer and thicker anteriorly. Chelicera with 12 teeth promarginally on cheliceral groove, with 10 small, irregularly aligned denticles retromarginally.

Maxillae, labium, and sternum light brown. Maxillae rectangular, with 59+60 added cuspule. Maxilla anteriolaterally sclerotized, with tiny serrulae. Labium tetragonal, with 30 cuspules. Labial furrow distinct. Sternum with 9 edges, with three distinct sternal sigillae at left and right margins. Sternal sigillae circular, enlarged in size front to back.

Maxillae, labium, sternum, and coxae with blackish setae. Palps and legs brown, covered with black hair at variable lengths. Palpal tarsus with single claw with 9 denticles; also with 10 trichobothria on a single row dorsally. Palpal tibia with two rows of trichobothria at prodorsal and retrodorsal sides with 6 trichobothria on each row.

Table 1. Palp and legs measurements of *Macrothele drolshageni* sp. n. (Leg I absent).

Holotype ♀	**Palp**	**Leg I**	**Leg II**	**Leg III**	**Leg IV**
Femur	2.10	-	2.60	2.35	3.00
Patella	1.10	-	1.50	1.40	1.70
Tibia	1.50	-	1.70	1.50	2.50
Metatarsus	-	-	1.70	1.50	3.00
Tarsus	1.60	-	1.10	1.10	1.50
Total	**6.30**	**-**	**8.60**	**7.85**	**11.70**

Leg tarsi with 9-12 trichobothria on a single row, metatarsi with 10 trichobothria on each of two rows of trichobothria. Superior tarsal claws in pairs. 2nd and 3rd tarsal claws with sigmoidally aligned 10, 4th tarsal claws with 9 teeth. Inferior claws on 2nd and 3rd legs with 3, 4th leg with 4 teeth. See Table (1) for palp and leg measurements. See below for palp and leg spination.

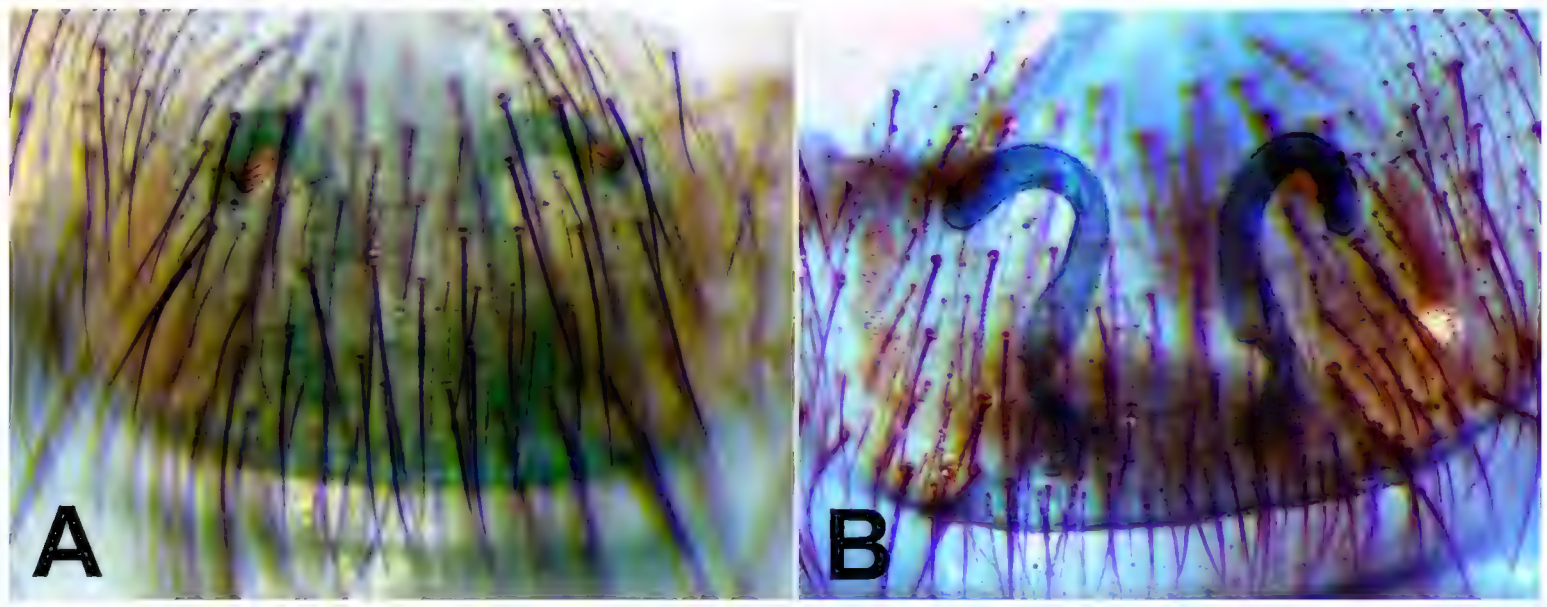

Fig. 2. *Macrothele drolshageni* sp. n., vulvae. A. ventral view. B. dorsal view.

Spination. Palp: femur 0; patella 0; tibia p1–1; tarsus pv1–1–1, rv1–1–1–1, v1. **Leg II:** femur pd1; patella pd1; tibia pd1, pv1, rv1, v1–1; metatarsus pd1, v9; tarsus pv1–1–1, rv1–1–1. **Leg III:** femur 0; patella pd1, rd1–1; tibia p1–1, rd1–1, d1, v2–3; metatarsus pd1–1–1, r1–1–1, d1, v2–1–2; tarsus pv1–1–1, r1, rv1–1–1. **Leg IV:** femur 0; patella p1, rd1; tibia p1–1, r1–1, rv1, v2–2; metatarsus pd1–1–1, r1–1, v9; tarsus pv4, r2, rd1.
Abdomen greyish, covered with blackish tiny hair. Spinnerets lightly coloured compared to abdomen. PMS club-shaped and single segmented. PLS digitiform, three-segmented. PLS diameter: 0.28, basal: 1.68, medial: 083, apical: 1.05. Abdomen with slit sensillae ventrally at the anterior of epigastric furrow.

Spermatecae basally wide and divergently oriented, but approaching each other after a sudden bend towards the medial and sharply oriented to posterior at distal end.

Male. Unknown
Distribution. Known only from type locality.

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***Macrothele drolshageni* Özkütük, Elverici, Yağmur & Kunt, 2019**

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Cheiracanthium mildei L. Koch, 1864 (Araneae: Cheiracanthiidae), a new faunistic record for Cyprus

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Abstract

The spider species *Cheiracanthium mildei* L. Koch, 1864 of family Cheiracanthiidae is newly recorded from Cyprus. Photographs of copulatory organs are presented together with information on geographical distribution of the species.

Keywords: Araneae, Cheiracanthiidae, yellow sac spider, Mediterranean, Cyprus.

Introduction

Genus *Cheiracanthium* C.L. Koch, 1839 has a wide distribution throughout the world and is represented by 212 species (World Spider Catalog, 2019), only 33 of them are distributed in Europe and around (Helsdingen, 2019). Although *Cheiracanthium mildei* L. Koch, 1864 originates from the Mediterranean region, Bryant (1952) recorded it from USA. With this research it is the first time to record *C. mildei* from the island of Cyprus. Additionally, genus *Cheiracanthium* and family Cheiracanthiidae are also recorded for the first time from Cyprus.

Material and Methods

Samples were collected from Beşparmak Mountains of northern Cyprus using pitfall traps, in addition to a sample from Lefkoşa. Species identifications were made using a Leica S8AP0 stereomicroscope and based on genitalia drawings of Rozwałka *et al.* (2017).

Results

Family **Cheiracanthiidae** Wagner, 1887
Genus ***Cheiracanthium*** C.L. Koch, 1839

Cheiracanthium mildei L. Koch, 1864
C. mildei L. Koch, 1864: 144 (D ♂♀).
C. mildei L. Koch, 1866: 253, pl. 10, f. 161-163 (♂♀).
C. mildei Bryant, 1952: 120, f. 1-3 (♂♀).
C. mildei Tyschchenko, 1971: 127, f. 305 (♀).
C. mildei Heimer & Nentwig, 1991: 396, f. 1032 (♂♀).
C. mildei Mcheidze, 1997: 170, f. 317-318 (♀).
C. mildei El-Hennawy, 2001: 114 (synonymized).
C. mildei Van Keer et al., 2007: 62, f. 1-3 (♂♀).
C. mildei Rozwałka, Rutkowski & Bielak-Bielecki, 2017: 66, f. 1f-g (♂♀).
For detailed synonyms see World Spider Catalog (2019).

Material examined: 1♂, Cyprus, Lefkoşa, Kalavaç Village, Alevkayası (35°17'06"N, 33°31'41"E), a.s.l. 630 m, 15 September 2017, leg. K.B. Kunt. – 2♂, 1♀, Cyprus, Beşparmak Mountains (35°16'54"N, 33°29'06"E), a.s.l. 576 m, 13 September 2018, leg. S. Gücel.

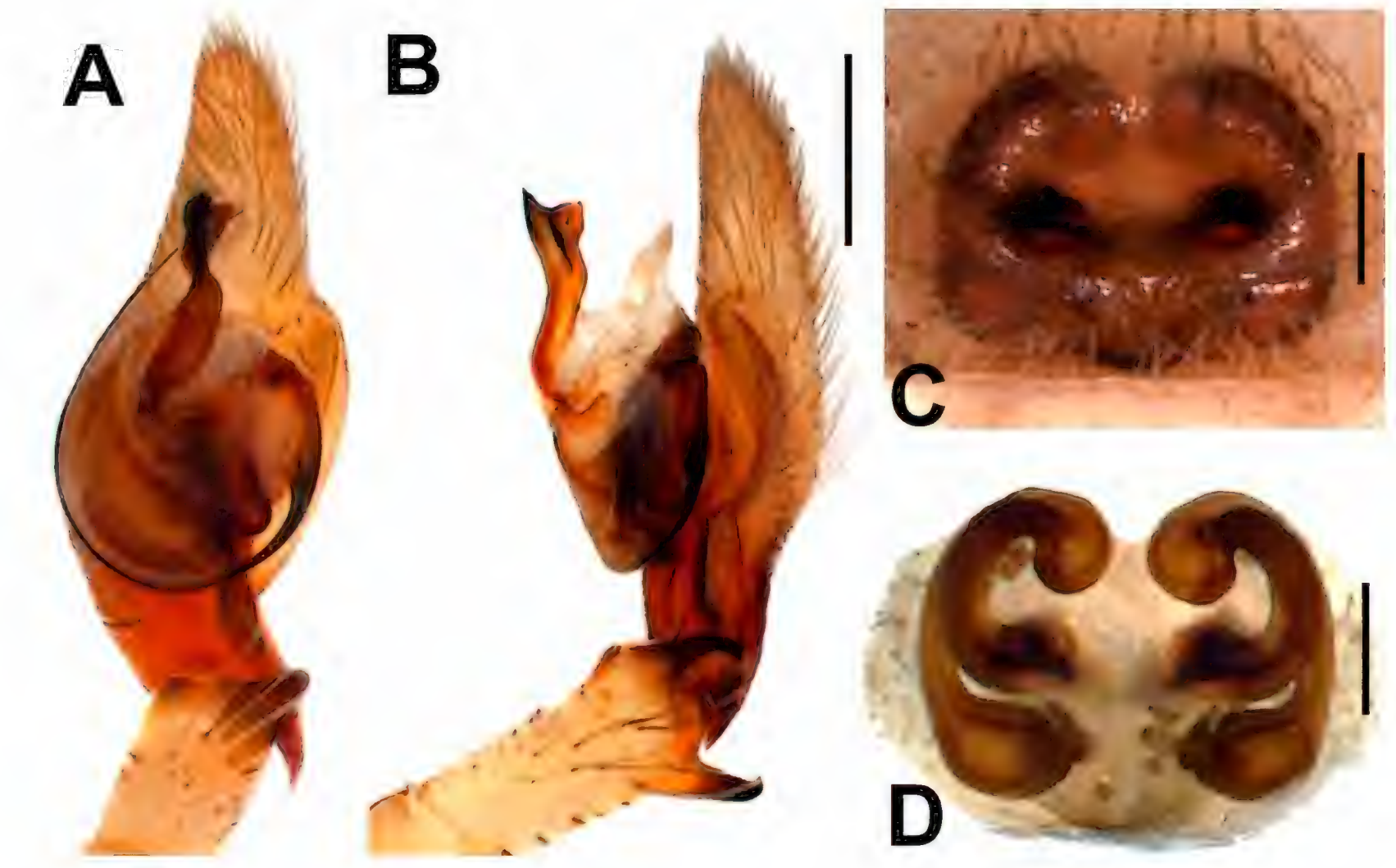

Fig 1. *Cheiracanthium mildei* L. Koch, 1864. A-B. Male palp. A. ventral view. B. retrolateral view. C-D. Vulvae. C. ventral view. D. dorsal view. Scale lines: 0.25 mm.

Distribution: Albania, Argentina, Austria, Azerbaijan, Belgium, Bulgaria, Canada, Croatia, Czech Republic, France (Corsica), Georgia, Germany, Greece (Crete, Dodecanese Islands, North Aegean Islands), Hungary, Iran, Israel, Italy (Sardinia, Sicily), Macedonia, Malta, Moldova, North Africa, North Caucasus, Poland, Portugal (Azores), Romania, Russia, Slovakia, Slovenia, Spain, Switzerland, Ukraine, United States, Turkey (Bayer, 2014; Danışman *et al.*, 2019; Helsdingen, 2019; Otto, 2018; van Keer *et al.*, 2007; World Spider Catalog, 2019).

Comments: According to the general distribution list of the species above, it is clear that it has a wide distribution in almost all the Mediterranean islands and in the countries which have coast to the Mediterranean Sea. The reason why *C. mildei* has not been recorded from Cyprus until today can be attributed to the paucity of systematic arachnological studies. Together with *C. mildei*, some other similarly distributed *Cheiracanthium* species, such as *C. elegans* Thorell, 1875, *C. erraticum* (Walckenaer, 1802) etc. can be recorded in near future from Cyprus.

Acknowledgment

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Second record of *Hippasa pisaurina* Pocock, 1900 (Araneae: Lycosidae) from Iraq

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Abstract

The lycosid spider, *Hippasa pisaurina* Pocock, 1900 is recorded from Baghdad, Iraq. Now, it is recorded for the second time from a locality near Basrah. Its general habitus and genitalia are illustrated. New locality data of this species are also given.

Keywords: Spiders, Lycosidae, *Hippasa*, new locality, Iraq.

Introduction

The araneological studies of Iraq are still poor when compared with the neighbouring countries. Iraq has only 32 species of 29 genera in 16 families (Zamani & Hennawy, 2016). According to this paper, there are only 4 lycosid species in Iraq. *Hippasa pisaurina* Pocock, 1900 is one of them. First record of this species was given from Iraq by Tikader & Malhotra (1980) from Baghdad. We could find it for the second time after 39 years from Iraq (Fig. 1). Here, the second record of this species from Basrah, Iraq is given with photographs of female genitalia and its habitus.

Material and Methods

In this study, the specimens were obtained by manual collection of specimens found under stones in the surroundings of Basrah, Iraq. Specimens were preserved in 70% ethanol and deposited in the Niğde Ömer Halisdemir University Arachnology Museum (NOHUAM) and Natural History Museum of Basrah University. Specimens

were examined and illustrated using a SZ61 Olympus stereomicroscope. For the identification, Tikader & Malhotra (1980) and Biswas & Raychaudhuri (2007) were consulted.

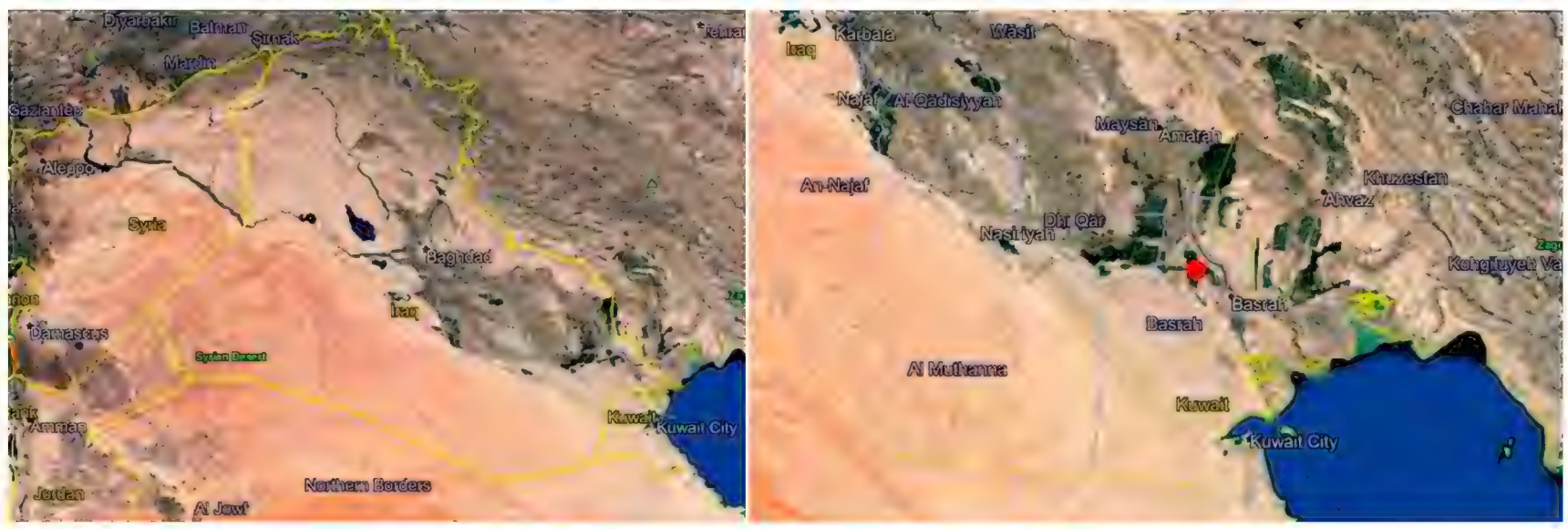

Fig. 1. Map of collecting locality area of *Hippasa pisaurina* Pocock, 1900 from Hour al-dabbab, South of Iraq (on the right) and the old record, from literature, of Baghdad (on the left).

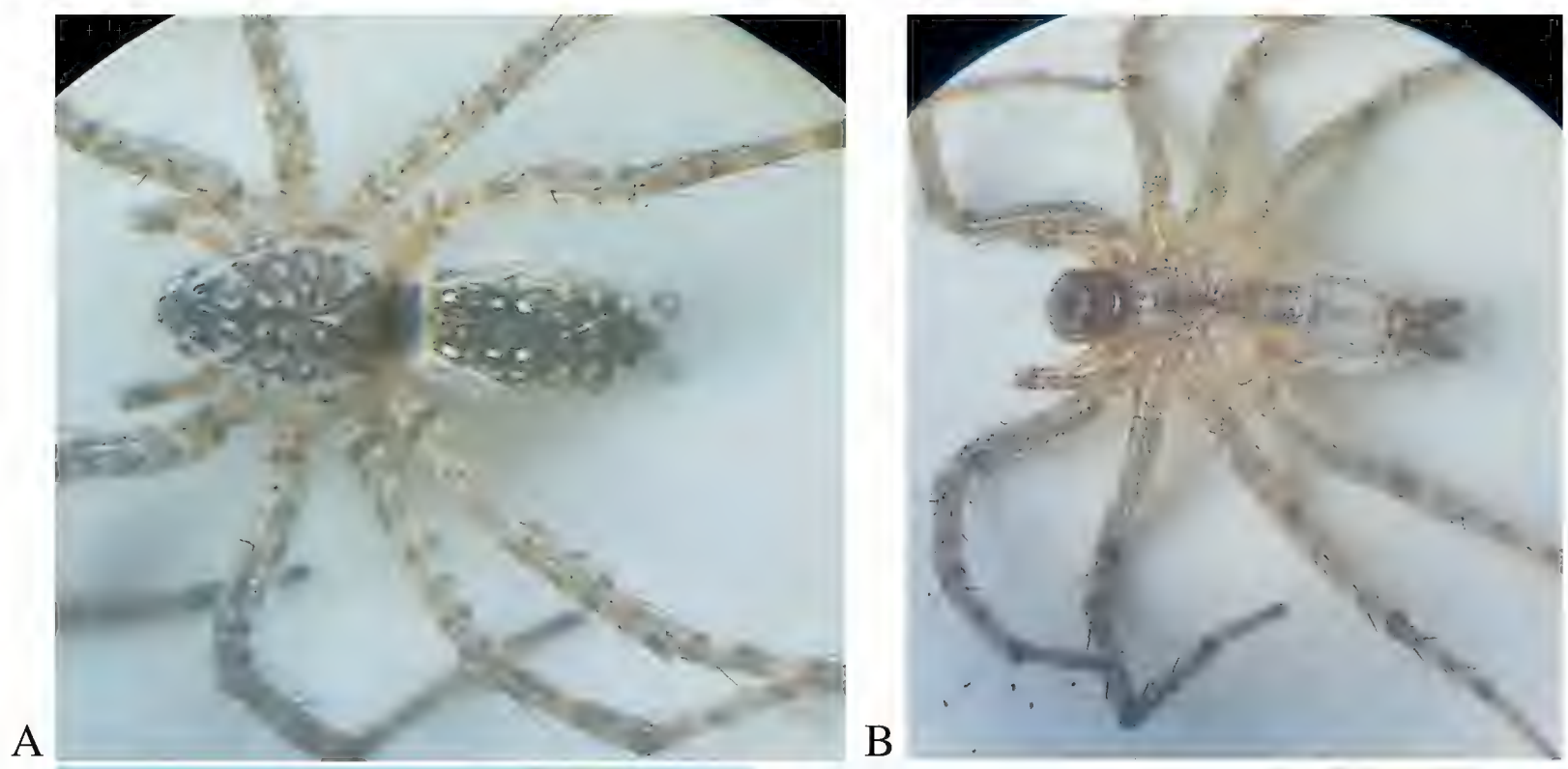

Fig. 2. *Hippasa pisaurina* Pocock, 1900 ♀. A-B. Habitus. A. dorsal view. B. ventral view. C-D. Genitalia. C. Epigyne, ventral view. D. Vulvae, dorsal view.

Results

Hippasa pisaurina Pocock, 1900

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Hippasa pisaurina Gajbe, 2007: 497, f. 230-234 (♂♀).
Hippasa pisaurina Biswas & Raychaudhuri, 2007: 245, f. 21-27 (♂♀).

Collected specimens: Basrah: Hour al-dabbab (30°40'395"N, 47°30'451"E), 13.IV.2019 (2♀♀), leg. Shurooq Abdullah Najim.
Locality data: Temperature: 20ºC; Humidity 34%.
Measurements: Cephalothorax length 5 mm, width 3 mm. Sternum length 3 mm, width 2.7 mm. Abdomen length 7 mm, width 2.7 mm.
Habitus and Genitalia: Fig. (2).

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The spider fauna of the inner part of Western Anatolia

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Abstract

This study was done on the inner part of Western Anatolia in Turkey. Spiders were collected from field by using aspirator, sweeping net, and pitfall traps in the study area during two years, beginning from April 2015 to October 2016. As a result of identification of these specimens, a total of 184 spider species belonging to 118 genera in 28 families were recorded from the study area. All specimens were labelled and preserved as museum material in Arachnology Museum of Niğde Ömer Halisdemir University.

Keywords: Spider, Fauna, Western Anatolia, Turkey.

Introduction

The spider fauna of Turkey is poorly known compared with many other countries of the world. Despite of the increase in studies on Turkish spiders during recent years, there are still many regions of the country that remain insufficiently investigated. Up to now, 48164 species of 4136 genera of spiders have been described in the world (World Spider Catalog, 2019). There are only 1117 species, belonging to 52 families known from Turkey (Demir & Seyyar, 2017). On this study area, there is only one study was done (Seyyar *et al.*, 2018). The aim of this study is to present the spider diversity of the inner part of Western Anatolia.

Material and Methods

All specimens were collected from field by using aspirator, sweeping net, and pitfall traps from 89 localities in the study area (Fig. 1, Table 1) during two years, beginning from April 2015 to October 2016. The identification was made by means of a SZX61 Olympus stereomicroscope. Museum material was used for the species comparison and identification. The specimens were labelled and preserved as museum material in Arachnology Museum of Niğde Ömer Halisdemir University (NOHUAM).

Fig. 1. Location of the study area (Inner part of Western Anatolia) in Turkey showing different localities.

Results and Discussion

The total of 184 spider species, belonging to 118 genera in 28 families (Fig. 2, Table 2), were identified from the study area. Most species rich families were Gnaphosidae (41), Salticidae (24), Thomisidae (20), Lycosidae (17), and Theridiidae (15). According to the results of this study, the spider diversity in the study area contains nearly 54% at the family level, 35% at the genus level, and 16.5% at the species level of all Turkish spiders.

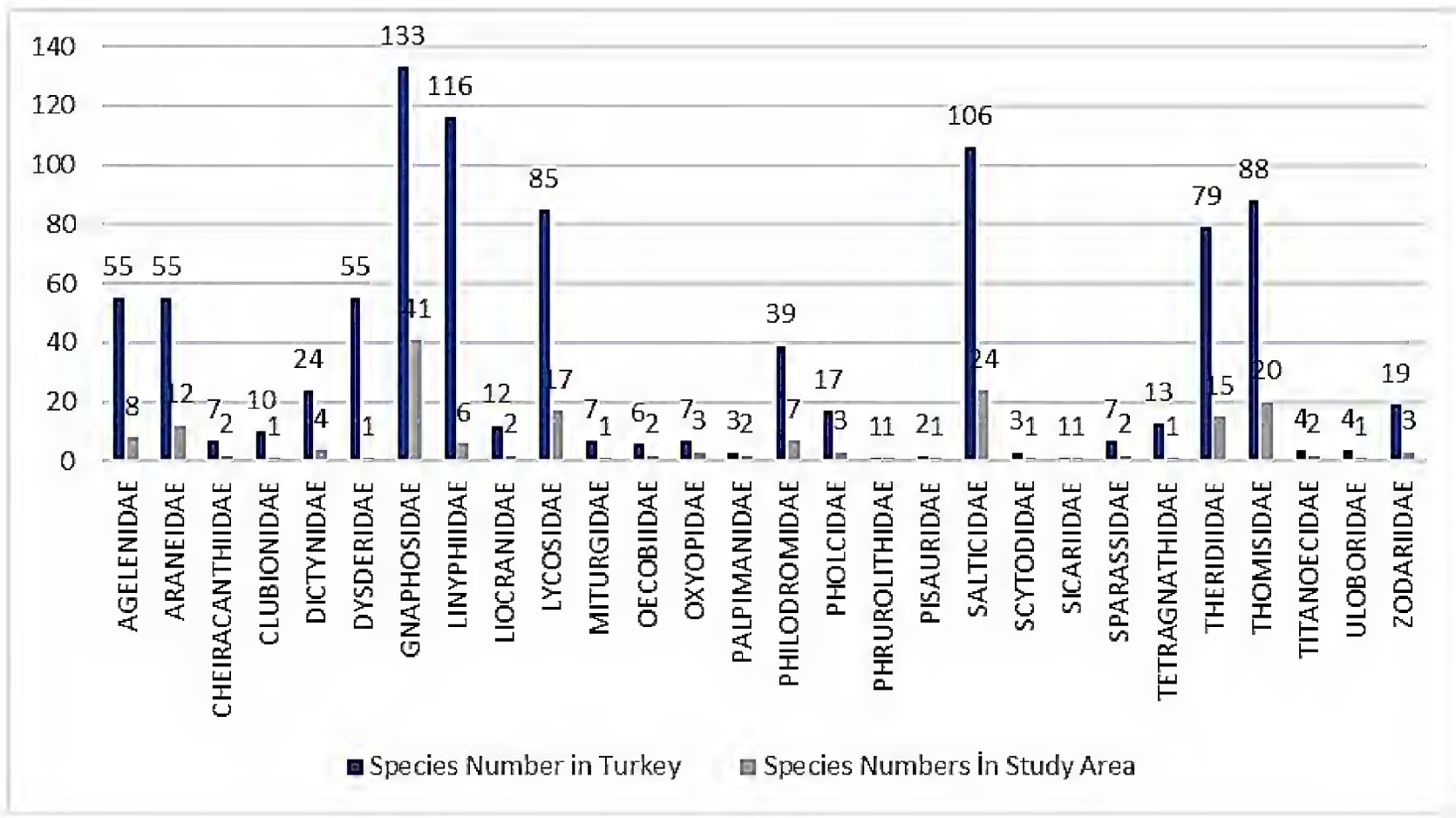

Fig. 2. Comparison of species numbers of 28 spider families in the study area in Turkey.

Table 1. Localities in the study area.

No.	Localities		
1	Afyonkarahisar, Sultandağı, Değirmenköy	46	Uşak, Eşme- Ulubey yolu 2
2	Afyonkarahisar, Sultandağı, Akbaba köyü	47	Uşak, Eşme- Ulubey yolu 3
3	Afyonkarahisar, Sultandağı, Camözü köyü	48	Uşak, İlyaslı
4	Afyonkarahisar, Sultandağı, Dereçine köyü	49	Uşak, İlyaslı, Çukurağılı
5	Afyonkarahisar,Sultandağı, Dereçine köyü, vadi içi	50	Uşak, Karaağaç Göleti Çevresi
6	Afyonkarahisar, Sultandağı 1	51	Uşak, Banaz, Kızılcaören
7	Afyonkarahisar, Sultandağı 2	52	Uşak, Banaz, Yeşilyurt
8	Afyonkarahisar, Sultandağı 3	53	Kütahya, Dumlupınar, Büyükoturak
9	Afyonkarahisar, Sultandağı, Yakasinek	54	Kütahya, Dumlupınar Şehitliği Çevresi
10	Afyonkarahisar, Sultandağı, Deresinek	55	Kütahya, Dumlupınar, Ağaç
11	Afyonkarahisar, Sultandağı, Deresinek vadi içi	56	Kütahya, Dumlupınar-Altıntaş yolu üzeri
12	Afyonkarahisar, Çay	57	Kütahya, Dumlupınar-Altıntaş yolu üzeri
13	Afyonkarahisar, Çay, Eber gölü	58	Kütahya, Altıntaş, Pusan-Doğanlar yolu üzeri
14	Afyonkarahisar, Bolvadin	59	Kütahya, Aslanapa, Haydarlar
15	Afyonkarahisar, Bolvadin, Özburun	60	Kütahya, Aslanapa, Ada köyü civarı
16	Afyonkarahisar, Bolvadin, Özburun	61	Kütahya, Koçak
17	Afyonkarahisar, Bolvadin, Kemerkaya	62	Kütahya, Gelinkaya
18	Afyonkarahisar, Emirdağ, Başkonak	63	Kütahya, Göynükören
19	Afyonkarahisar, Emirdağ, Ağılcık	64	Kütahya- Uşak Yolu
20	Afyonkarahisar, Emirdağ, Emirinköyü	65	Kütahya, Kumarı
21	Afyonkarahisar, Bayat	66	Kütahya, Aydoğdu
22	Afyonkarahisar, İşcehisar, Doğanlar	67	Kütahya- Tavşanlı Yolu 1
23	Afyonkarahisar, Salar	68	Kütahya- Tavşanlı Yolu
24	Afyonkarahisar, Belkaraören	69	Kütahya, Tavşanlı
25	Afyonkarahisar, Şuhut	70	Kütahya, Tunçbilek
26	Afyonkarahisar, Şuhut, Tekke	71	Kütahya, Domaniç, Muhacirler
27	Afyonkarahisar, Şuhut, Başören	72	Kütahya, Domaniç, Çamlıca-Küçükköy arası
28	Afyonkarahisar, Şuhut- Sandıklı Arası	73	Kütahya, Tavşanlı- Emet Yolu 1
29	Afyonkarahisar, Sandıklı	74	Kütahya, Tavşanlı- Emet Yolu 2
30	Afyonkarahisar, Sandıklı, Kızılören	75	Kütahya, Tavşanlı- Emet Yolu 3
31	Afyonkarahisar, Dinar, Akça	76	Kütahya, Tavşanlı- Emet yolu vadi içi
32	Afyonkarahisar, Dinar, Büyüçalanı	77	Kütahya, Tavşanlı- Emet Yolu
33	Afyonkarahisar, Dinar, Başmakçı, Çığrı	78	Kütahya, Emet, İkibaşlı
34	Afyonkarahisar, Dazkırı, Bozan	79	Kütahya, Emet, Esentepe
35	Afyonkarahisar, Sinanpaşa	80	Kütahya, Hisarcık
36	Afyonkarahisar, Hocalar, Akçadere	81	Kütahya, Tavşanlı- Simav Yolu
37	Uşak, Sivaslı, Avgancık	82	Kütahya, Tavşanlı- Simav yolu vadi
38	Uşak, Sivaslı	83	Kütahya, Tavşanlı- Simav yolu vadi içi
39	Uşak, Sivaslı, Yayalar	84	Kütahya, Simav, Kapıkaya
40	Uşak, Karahallı, Delihıdırlı	85	Kütahya, Simav- Şaphane arası
41	Uşak, Karahallı, Paşalar	86	Kütahya, Şaphane
42	Uşak, Karahallı-Ulubey yolu 1	87	Kütahya, Gediz, Pınarbaşı
43	Uşak, Karahallı-Ulubey yolu 2	88	Kütahya, Çavdarhisar
44	Uşak, Karahallı-Ulubey yolu 3	89	Kütahya, Bayramşah
45	Uşak, Eşme- Ulubey yolu 1		

Table 2. The spider list of the study area.

Family	**AGELENIDAE**
1	*Agelena labyrinthica* (Clerck, 1757)
2	*Agelena orientalis* C.L. Koch, 1837
3	*Agelescape caucasica* Guseinov, Marusik & Koponen, 2005
4	*Agelescape dunini* Guseinov, Marusik & Koponen 2005
5	*Agelescape gideoni* Levy, 1996
6	*Maimuna vestita* (C.L. Koch, 1841)
7	*Tegeneria argaeica* Nosek, 1905
8	*Textrix denticulata* (Olivier, 1789)
Family	**ARANEIDAE**
1	*Aculepeira armida* (Savigny, 1825)
2	*Aculepeira ceropegia* (Walckenaer, 1802)
3	*Agalenatea redii* (Scopoli, 1763)
4	*Araneus diadematus* Clerck, 1757
5	*Araniella cucurbitina* (Clerck, 1757)
6	*Argiope bruennichi* (Scopoli 1772)
7	*Argiope lobata* (Pallas, 1772)
8	*Cyclosa conica* (Pallas 1772)
9	*Gibbaranea bituberculata* (Walckenaer, 1802)
10	*Larinioides cornutus* (Clerck, 1757)
11	*Mangora acalypha* (Walckenaer, 1802)
12	*Neoscona adianta* (Walckenaer, 1802)
Family	**CHEIRACANTHIIDAE**
1	*Cheiracanthium erraticum* (Walckenaer, 1802)
2	*Cheiracanthium pennyi* O. Pickard-Cambridge, 1873
Family	**CLUBIONIDAE**
1	*Clubiona caerulescens* L. Koch, 1867
Family	**DICTYNIDAE**
1	*Argyroneta aquatica* (Clerck, 1757)
2	*Dictyna uncinata* Thorell, 1856
3	*Emblyna annulipes* (Blackwall, 1846)
4	*Lathys humilis* (Blackwall, 1855)
Family	**DYSDERIDAE**
1	*Dysdera crocata* C.L. Koch, 1838
Family	**GNAPHOSIDAE**
1	*Anagraphis pallens* Simon, 1893
2	*Aphantaulax trifasciata* (O. Pickard-Cambridge, 1872)
3	*Berinda hakani* Chatzaki & Seyyar, 2010
4	*Callilepis cretica* (Roewer, 1928)
5	*Callilepis nocturna* (Linnaeus, 1758)
6	*Cesonia aspida* Chatzaki, 2002
7	*Civizelotes caucasius* (L. Koch, 1866)
8	*Cryptodrassus creticus* Chatzaki, 2002

9	*Drassodes lacertosus* (O. Pickard-Cambridge, 1872)
10	*Drassodes lapidosus* (Walckenaer, 1802)
11	*Drassodes lutescens* (C.L. Koch, 1839)
12	*Drassodes pubescens* (Thorell, 1856)
13	*Drassyllus crimeaensis* Kovblyuk, 2003
14	*Drassyllus praeficus* (L. Koch, 1866)
15	*Gnaphosa dolosa* Herman, 1879
16	*Gnaphosa opaca* Herman, 1879
17	*Haplodrassus dalmatensis* (L. Koch, 1866)
18	*Haplodrassus invalidus* (O. Pickard-Cambridge, 1872)
19	*Haplodrassus morosus* (O. Pickard-Cambridge, 1872)
20	*Haplodrassus signifer* (C.L. Koch, 1839)
21	*Micaria albovittata* (Lucas, 1846)
22	*Micaria coarctata* (Lucas, 1846)
23	*Nomisia aussereri* (L. Koch, 1872)
24	*Nomisia conigera* (Spassky, 1941)
25	*Nomisia exornata* (C.L. Koch, 1839)
26	*Nomisia ripariensis* (O. Pickard-Cambridge, 1872)
27	*Parasyrisca turkenica* Ovtsharenko, Platnick & Marusik, 1995
28	*Phaeocedus braccatus* (L. Koch, 1866)
29	*Poecilochroa variana* (C.L. Koch, 1839)
30	*Pterotricha kochi* (O. Pickard-Cambridge, 1872)
31	*Scotophaeus scutulatus* (L. Koch, 1866)
32	*Setaphis carmeli* (O. Pickard-Cambridge, 1872)
33	*Setaphis parvula* (Lucas, 1846)
34	*Trachyzelotes lyonneti* (Audouin, 1825)
35	*Trachyzelotes malkini* Platnick & Murphy, 1984
36	*Zelotes cingarus* (O. Pickard-Cambridge, 1874)
37	*Zelotes longipes* (L. Koch, 1866)
38	*Zelotes metellus* Roewer, 1928
39	*Zelotes puritanus* Chamberlin, 1922
40	*Zelotes subterraneus* (C.L. Koch, 1833)
41	*Zelotes* sp.
Family LINYPHIIDAE	
1	*Erigone atra* Blackwall, 1833
2	*Frontinellina frutetorum* (C.L. Koch, 1835)
3	*Lepthyphantes leprosus* (Ohlert, 1865)
4	*Linyphia triangularis* (Clerck, 1757)
5	*Megalepthyphantes nebulosus* (Sundevall, 1830)
6	*Neriene peltata* (Wider, 1834)
Family LIOCRANIDAE	
1	*Arabelia pheidoleicomes* Bosselaers, 2009
2	*Mesiotelus scopensis* Drensky, 1935
Family LYCOSIDAE	
1	*Alopecosa cursor* (Hahn, 1831)

2	*Alopecosa farinosa* (Herman, 1879)
3	*Alopecosa pulverulenta* (Clerck, 1757)
4	*Arctosa cinerea* (Fabricius, 1777)
5	*Arctosa leopardus* (Sundevall, 1833)
6	*Arctosa tbilisiensis* Mcheidze, 1946
7	*Geolycosa vultuosa* (C.L. Koch, 1838)
8	*Hogna radiata* (Latreille, 1817)
9	*Lycosa praegrandis* C.L. Koch, 1836
10	*Pardosa agrestis* (Westring, 1861)
11	*Pardosa agricola* (Thorell, 1856)
12	*Pardosa monticola* (Clerck, 1757)
13	*Pardosa proxima* (C.L. Koch, 1847)
14	*Piratula latitans* (Blackwall 1841)
15	*Trochosa hispanica* Simon, 1870
16	*Trochosa spinipalpis* (F.O. Pickard-Cambridge, 1895)
17	*Wadicosa fidelis* (O. Pickard-Cambridge, 1872)
Family MITURGIDAE	
1	*Zora spinimana* (Sundevall, 1833)
Family OECOBIIDAE	
1	*Oecobius rhodiensis* Kritscher, 1966
2	*Uroctea durandi* (Latreille, 1809)
Family OXYOPIDAE	
1	*Oxyopes heterophthalmus* (Latreille, 1804)
2	*Oxyopes lineatus* Latreille, 1806
3	*Oxyopes ramosus* (Martini & Goeze, 1778)
Family PALPIMANIDAE	
1	*Palpimanus orientalis* Kulczyński, 1909
2	*Palpimanus uncatus* Kulczyński, 1909
Family PHILODROMIDAE	
1	*Philodromus cespitum* (Walckenaer, 1802)
2	*Pulchellodromus pulchellus* (Lucas, 1846)
3	*Thanatus atratus* Simon, 1875
4	*Thanatus formicinus* (Clerck, 1757)
5	*Thanatus oblongiusculus* (Lucas, 1846)
6	*Thanatus pictus* L. Koch, 1881
7	*Thanatus vulgaris* Simon, 1870
Family PHOLCIDAE	
1	*Holocnemus pluchei* (Scopoli, 1763)
2	*Pholcus opilionoides* (Schrank, 1781)
3	*Pholcus phalangioides* (Fuesslin, 1775)
Family PHRUROLITHIDAE	
1	*Phrurolithus festivus* (C.L. Koch, 1835)
Family PISAURIDAE	
1	*Pisaura mirabilis* (Clerck, 1757)
Family SALTICIDAE	

1	*Aelurillus luctuosus* (Lucas, 1846)
2	*Ballus chalybeius* (Walckenaer, 1802)
3	*Chalcoscirtus infimus* (Simon, 1868)
4	*Chalcoscirtus nigritus* (Thorell, 1875)
5	*Cyrba algerina* (Lucas, 1846)
6	*Euophrys frontalis* (Walckenaer, 1802)
7	*Evarcha falcata* (Clerck, 1757)
8	*Heliophanus cupreus* (Walckenaer, 1802)
9	*Heliophanus dampfi* Schenkel, 1923
10	*Heliophanus dubius* C.L. Koch, 1835
11	*Heliophanus edentulus* Simon, 1871
12	*Heliophanus flavipes* (Hahn, 1832)
13	*Heliophanus lineiventris* Simon, 1868
14	*Leptorchestes sikorskii* Prószyński, 2000
15	*Pellenes geniculatus* (Simon, 1868)
16	*Philaeus chrysops* (Poda, 1761)
17	*Phlegra bresnieri* (Lucas, 1846)
18	*Phlegra cinereofasciata* (Simon, 1868)
19	*Phlegra fasciata* (Hahn, 1826)
20	*Phlegra lineata* (C.L. Koch, 1846)
21	*Plexippus paykulli* (Audouin, 1825)
22	*Pseudeuophrys lanigera* (Simon, 1871)
23	*Salticus scenicus* (Clerck, 1757)
24	*Talavera aequipes* (O. Pickard-Cambridge, 1871)
Family SCYTODIDAE	
1	*Scytodes thoracica* (Latreille, 1802)
Family SICARIIDAE	
1	*Loxosceles rufescens* (Dufour, 1820)
Family SPARASSIDAE	
1	*Eusparassus walckenaeri* (Audouin, 1825)
2	*Micrommata virescens* (Clerck, 1757)
Family TETRAGNATHIDAE	
1	*Tetragnatha obtusa* C.L. Koch, 1837
Family THERIDIIDAE	
1	*Asagena phalerata* (Panzer, 1801)
2	*Cryptachaea riparia* (Blackwall, 1834)
3	*Enoplognatha mandibularis* (Lucas, 1846)
4	*Enoplognatha mordax* (Thorell, 1875)
5	*Enoplognatha oelandica* (Thorell, 1875)
6	*Enoplognatha thoracica* (Hahn, 1833)
7	*Episinus truncatus* Latreille, 1809
8	*Euryopis laeta* (Westring 1861) ?
9	*Kochiura aulica* (C.L. Koch, 1838)
10	*Neottiura herbigrada* (Simon, 1873)

11	*Simitidion simile* (C.L. Koch, 1836)
12	*Steatoda albomaculata* (De Geer, 1778)
13	*Steatoda paykulliana* (Walckenaer, 1806)
14	*Steatoda triangulosa* (Walckenaer, 1802)
15	*Theridion melanurum* Hahn, 1831
Family THOMISIDAE	
1	*Bassaniodes caperatus* (Simon, 1875)
2	*Bassaniodes pseudorectilineus* (Wunderlich, 1995)
3	*Bassaniodes tristrami* (O. Pickard-Cambridge, 1872)
4	*Heriaeus graminicola* (Doleschall, 1852)
5	*Misumena vatia* (Clerck, 1757)
6	*Ozyptila atomaria* (Panzer, 1801)
7	*Psammitis abramovi* (Marusik & Logunov, 1995)
8	*Psammitis ninnii* (Thorell, 1872)
9	*Runcinia grammica* (C.L. Koch, 1837)
10	*Spiracme striatipes* (L. Koch, 1870)
11	*Synema globosum* (Fabricius, 1775)
12	*Thomisus onustus* Walckenaer, 1805
13	*Tmarus stellio* Simon, 1875
14	*Xysticus edax* (O. Pickard-Cambridge, 1872)
15	*Xysticus kaznakovi* Utochkin, 1968
16	*Xysticus kempeleni* Thorell, 1872
17	*Xysticus kochi* Thorell, 1872
18	*Xysticus marusiki* Ono & Martens, 2005
19	*Xysticus thessalicus* Simon, 1916
20	*Xysticus* sp. ? *
Family TITANOECIDAE	
1	*Nurscia albomaculata* (Lucas, 1846)
2	*Titanoeca quadriguttata* (Hahn, 1833)
Family ULOBORIDAE	
1	*Uloborus walckenaerius* Latreille, 1806
Family ZODARIIDAE	
1	*Pax islamita* (Simon, 1873)
2	*Zodarion kossamos* Bosmans, 2009
3	*Zodarion thoni* Nosek, 1905

* This species maybe a new species. We collected only a female specimen. So, we need a male specimen to get sure identification.

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Marjanus Chatzaki, 2018 and *Marjanus platnicki* (Zhang, Song & Zhu, 2001) (Araneae: Gnaphosidae) are new records for Turkish Spider Fauna

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Abstract

The gnaphosid spider species, *Marjanus platnicki* (Zhang, Song & Zhu, 2001) is recorded for the first time from Turkey. Its general habitus and genitalia are illustrated. Description and collecting data of this species are also given. Also, genus *Marjanus* Chatzaki, 2018 is recorded for the first time from Turkey.

Keywords: Spiders, Gnaphosidae, new record, Turkey.

Introduction

Gnaphosidae is one of the big spider families, which contains worldwide 2530 species from 158 genera (World Spider Catalog, 2019). This family is now the largest spider family in Turkey. The known gnaphosid fauna of Turkey includes 145 species and 30 genera (Demir & Seyyar, 2017). Genus *Marjanus* was establised as a new zelotine genus from Grecee by Chatzaki (2018). It is a small genus of zelotine; it has only one species. We could find a species of this genus in Anatolia. The aim of this paper is to present the gnaphosid spider *Marjanus platnicki* (Zhang, Song & Zhu, 2001) as a new record for the Turkish araneofauna in addition to the first record of genus *Marjanus* Chatzaki, 2018 from Turkey too.

Material and Methods

In this study, both female specimens were collected from Uşak Province and Kayseri Province (Erciyes Mountain) in Anatolia. Examined specimens were preserved in 70% ethanol and deposited in the NOHUAM. In the identification, Chatzaki (2018) was consulted. The identification was made by means of a SZX61 Olympus stereomicroscope.

Fig. 1. Collecting localities, of *Marjanus platnicki* (Zhang, Song & Zhu, 2001), from Uşak Province and Erciyes Mountain, Kayseri Province.

Results

Marjanus platnicki (Zhang, Song & Zhu, 2001)

Taxonomic references

Zelotes platnicki Zhang, Song & Zhu, 2001**:** 55, f. 5A-C (D♂).
Zelotes platnicki Song, Zhu & Zhang, 2004**:** 273, f. 161A-C (♂).
Marjanus platnicki Chatzaki, 2018**:** 523, f. 1-14 (♂, D♀, T from *Zelotes*).

Collected specimens: Uşak Province: Eşme- Ulubey yolu 3 (38°25'53"N, 29°02'10"E), 790m, 23.VII.2015 (1♀); 23.X.2016 (1♀), Leg. Osman Seyyar & Hakan Demir. **Kayseri Province:** Hisarcık District, Erciyes Mountain (38°34'36.3"N, 35°29'49.9"E), 2000m, 21.VI.2018, (1♀), Leg. Durmuş Ok.

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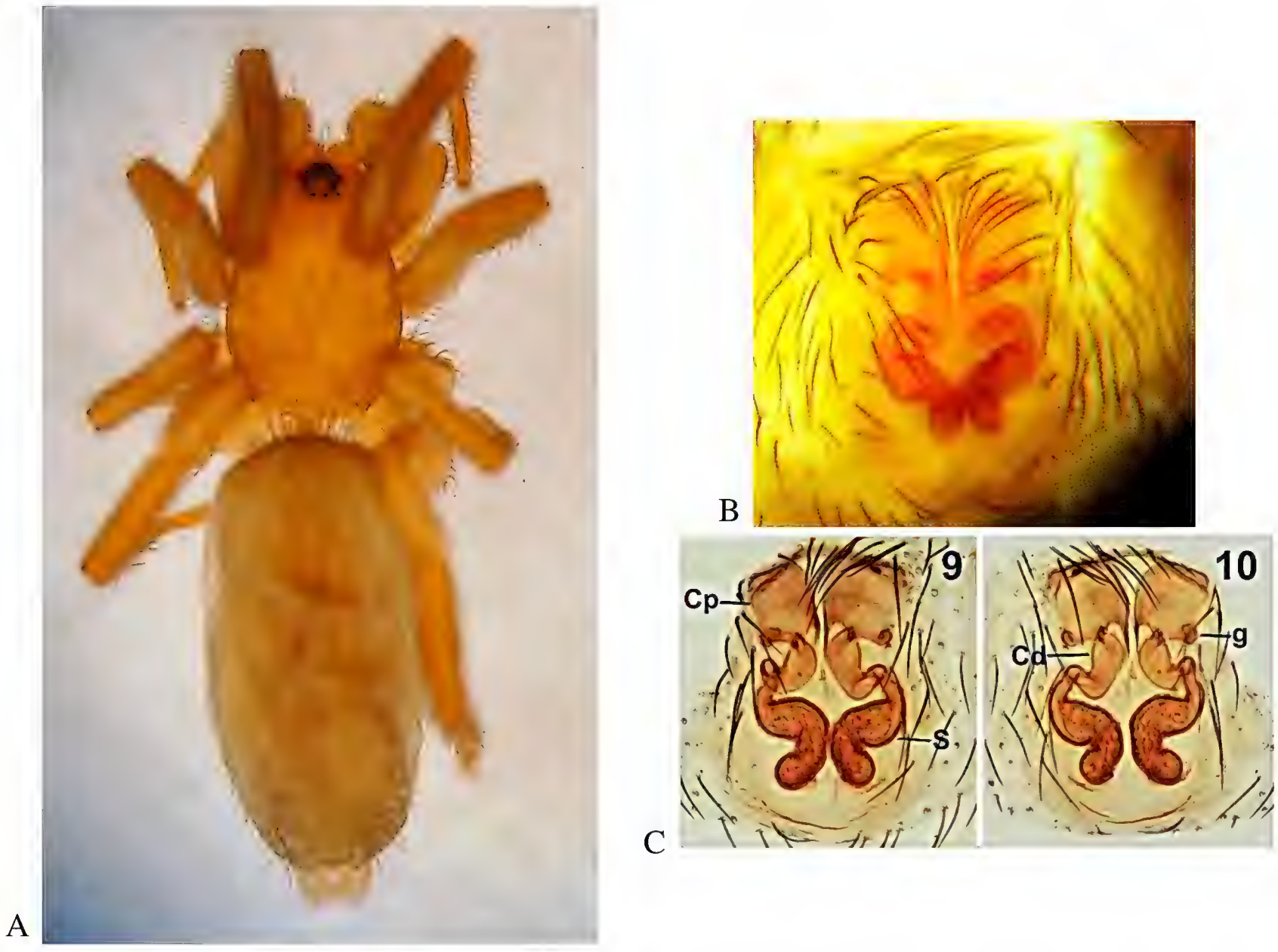

Fig. 2. *Marjanus platnicki* (Zhang, Song & Zhu, 2001) ♀. A. Habitus, dorsal view. B. Epigyne, ventral view. C. Female genitalia, [Figs. 9-10, after Chatzaki, 2018: 525], for comparison.

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New locality records of *Charinus ioanniticus* (Kritscher, 1959) in Egypt (Arachnida: Amblypygi: Charinidae)

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Abstract

The whip spider *Charinus ioanniticus* (Kritscher, 1959) is recorded again from Egypt. Five females were found in Shubra, Cairo and one female was found in Damietta. All specimens were found inside old houses.

Keywords: Amblypygi, Charinidae, *Charinus ioanniticus*, distribution, Egypt.

Introduction

Charinus ioanniticus (Kritscher, 1959) was described for the first time as *Lindosiella ioannitica* nov. gen. & nov. spec. from Lindos in Rhodes Island (Greece); 1♂(?), 3♀♀ and 4 juvenile animals were found on walls and in rock crevices of the supporting substructures of St. John castle on 15 and 16 April 1959 (Kritscher, 1959).

The amblypygid fauna of the eastern Mediterranean region is represented by only one species, *Charinus ioanniticus* (Kritscher, 1959), which has been reported from Greece (Kritscher, 1959), Turkey (Kovařík & Vlasta, 1996; Weygoldt, 2005; Seyyar & Demir, 2007; Miranda *et al.*, 2016), Israel (Kraus, 1961; Rosin & Shulov, 1960; Miranda *et al.*, 2016), and Egypt (El-Hennawy, 2002).

Weygoldt (2005) discussed the biogeography, systematic position, and reproduction of *C. ioanniticus* and said that: "The Greek population, from the islands Rhodes and Kos, is an all-female population that most likely reproduces parthenogenetically".

Again, Weygoldt (2007) discussed the parthenogenesis and reproduction in *C. ioanniticus* and stated that: "There is a bisexual population in Turkey, where the specimens were found in natural habitats (Weygoldt, 2005). On the island of Rhodes,

however, the animals live in artificial cave-like conditions under the old cities of Rhodes and Lindos. The same may be true for the populations in Israel and Egypt, where the animals have been found in ruins, houses, and the sewage system. However, the number of specimens collected in these areas so far is too low to allow the assumption of all-female populations".

Miranda *et al.* (2016) described *Charinus israelensis* Miranda *et al.*, 2016 as a cave dwelling new species of *Charinus* from Israel and reported new localities for *C. ioanniticus* from several new localities in Israel and Turkey.

Order **Amblypygi** Thorell, 1883
Family **Charinidae** Quintero, 1986
Genus ***Charinus*** Simon, 1891
Charinus ioanniticus (Kritscher, 1959)

I. On 26th November 2017, Mr. Saeed Mohamed kindly brought five whip spiders (amblypygids) from an old house in Shubra, Cairo to my lab [ACE = Arachnid Collection of Egypt].

II. On 25th August 2018, Mr. Maged Motaz El-Saied discovered the presence of a whip spider at the entrance of an old house of humid wood with stones underneath, in Damietta. He kindly brought it to me later.

The identification of both family and genus levels depended on Weygoldt (2000). The diagnosis of family Charinidae Quintero, 1986 can be extracted from Weygoldt's key to the amblypygid genera pp. 21-22 as: Carapace anteriorly rounded, without concave anterior lateral margins; pedipalpal femur with numerous spines on dorsal surface; basal tooth of cheliceral hand bifurcate or rarely trifurcate. Legs II–IV with pulvilli; fourth tarsomere without oblique slit. Proximal edge of cleaning organ (on pedipalpal tarsus) without basal row of setae. Charinidae is the second large family, among the five families of order Amblypygi, after Phrynidae. Genus *Charinus* Simon, 1891 has basitibia of leg IV composed of four articles (Weygoldt, 2000).

The six whip spiders could be identified as *Charinus ioanniticus* (Kritscher, 1959) according to the original description of *Lindosiella ioannitica* by Kritscher (1959).

C. ioanniticus was previously recorded from Egypt (Fig. 1): El-Mallahat near Burg El-Arab (about 30°55'36"N, 29°31'50"E, elevation 20m) depending on 2 females collected on 19 September 1998 by Drs. Abdel-Nasser H. Ali and Tarek Tantawi of the Faculty of Science of Alexandria University [ACE 1998.09.19.AM.001-002] (El-Hennawy, 2002).

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Fig. 1. *Charinus ioanniticus* (Kritscher, 1959) ♀. Fig. 2. The locality of the first record of *C. ioanniticus* in El-Mallahat near Burg El-Arab, Egypt.

Saeed and Maged looked for more whip spiders in the same places where they could find their first specimens but they could not find any more individuals. This is similar to the result of my search on 8 October 2000, when I inspected the ruins of an old stony building with a deep rectangular room in the middle (Fig. 2), identical to the description of Dr. Ali, but I failed to locate any further specimen.

Now, the second record in Egypt is from Cairo Governorate: Cairo, Shubra, about 30º04'15"N, 31°14'42"E, elevation 32 m [ACE 2017.11.26.AM.001-005] (Fig. 3); and the third record in Egypt is from Damietta Governorate: Damietta (Dumyat), Abd El-Rahman St., about 31°25'26"N, 31°48'28"E, elevation 15 m [ACE 2018.08.25.AM.001] (Fig. 4).

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Figs. 3-4. *Charinus ioanniticus* (Kritscher, 1959) ♀ alive, from Cairo and Damietta.
3. Shubra, Cairo. © Saeed Mohamed. 4. Damietta (Dumyat). © Maged Motaz El-Saied.

The findings of *C. ioanniticus* in two other localities in Egypt widen its range of distribution in Egypt and in the eastern Mediterranean region "southwards" (Map 1). Also, the new specimens are measured and photographed for comparison with previously studied material (Table 1; Figs. 5-21).

Table 1. Comparison of measurements of Egyptian amblypygids, *Charinus ioanniticus* (Kritscher, 1959) ♀.

Locality	Total Length	Carapace Length	Carapace Width	Abdomen Length
Burg El-Arab	7.56	2.97	4.25	4.59
Cairo	7.4	3.4	4.1	4.0
	6.5	3.2	3.9	3.3
	~ 4.8 – 5.0 – 5.3			
Damietta	5.2	2.2	3.2	3.0

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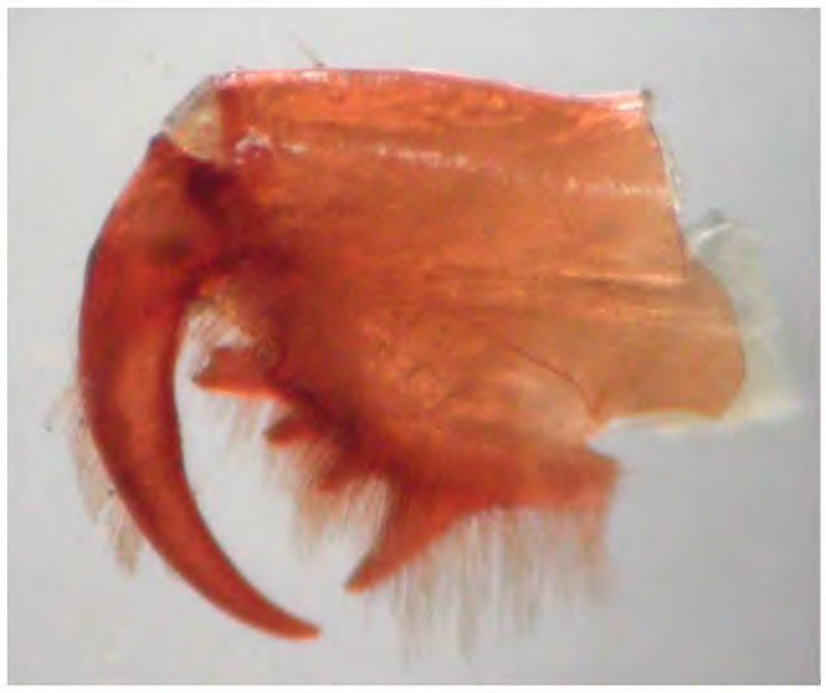

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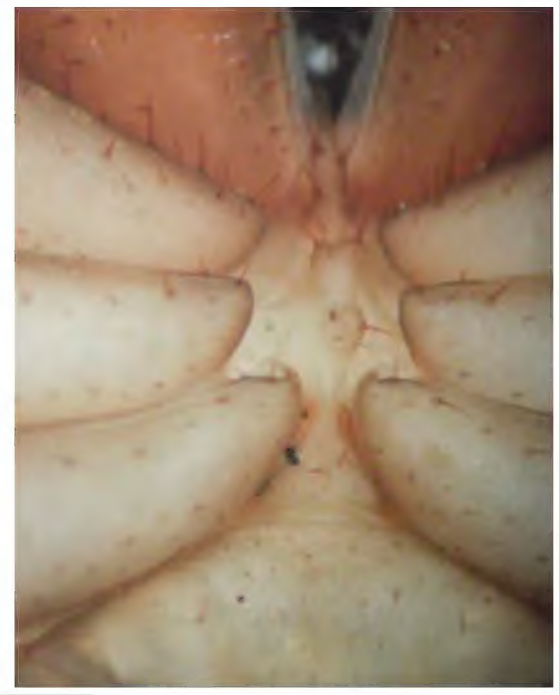

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Figs. 5-16. *Charinus ioanniticus* (Kritscher, 1959) ♀♀, from Shubra, Cairo (different specimens). 5, 6, 8, 10. Habitus, dorsal view. 7, 9, 11. Habitus, ventral view. 12. chelicera, medial view. 13. prosomal sternites, ventral view. 14. right pedipalp, ventral view. 15-16. pedipalp, tibia, basitarsus, and distitarsus. 15. dorsal view. 16. ventral view.

Map 1. Distribution map of *Charinus ioanniticus* (Kritscher, 1959) in Egypt. Black circle = literature record. Red circles = new records.

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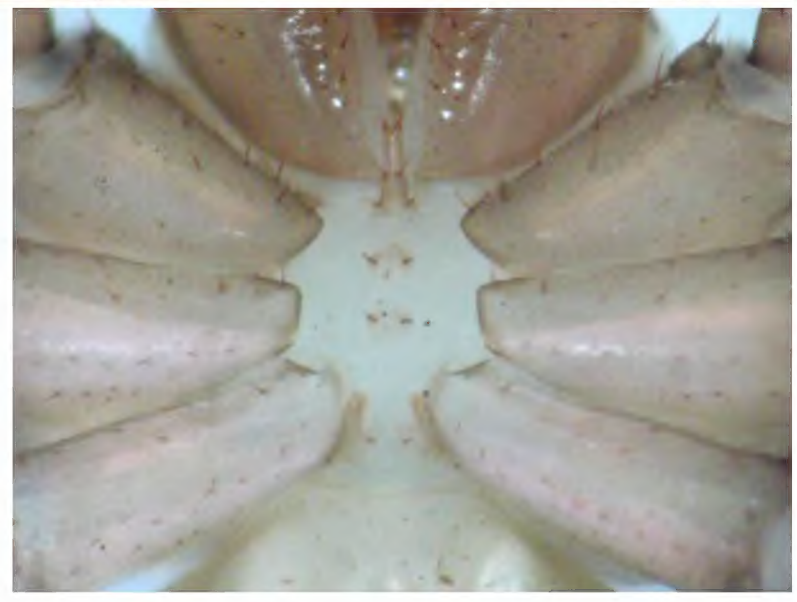

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Figs. 17-21. *Charinus ioanniticus* (Kritscher, 1959) ♀, from Damietta. 17. Habitus, dorsal view. 18. Habitus, ventral view. 19. Pedipalps and front of carapace, dorsal view. 20. Pedipalps and prosoma, ventral view. 21. prosomal sternites, ventral view.

The new studied material is collected from old houses not from natural habitats and does not include any male specimen. The number of specimens collected from Egypt until now is "too low to allow the assumption of all-female population" (Weygoldt, 2007).

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